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of 123**OU 7-10 Staged Interim Action Project, Stage II, Title II
Response Report - sorted by Org/Reviewer**Printed:
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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3918
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Technical	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 13, Section 1.5		

2. It is stated that post Stage II, the waste can be sorted into categories of less than or equal to 10 nCi/gram, > 10 but less than or equal to 100 nCi/gram, and > 100 nCi/gram. The current design and assay methodology does not provide adequate assurance that the less than or equal to 10 nCi/gram sort will be achieved. This sort (by category) is on a waste/soil container basis, not a population average.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3919
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Technical	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 15, Section 1.6		

3. The bounding assumption that technology is currently available to provide adequate digface and material assays of materials excavated from Pit 9 is satisfactory for digface monitoring, but not a satisfactory assumption relative to material assay requirements. NDA assay technology is adequate for TRU waste, but not adequate to meet objectives for the large volume of soil. An alternate strategy for soil (examples submitted for the soil characterization trade study) should be incorporated into the design. Alternate technologies exist to accomplish project objectives.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3920
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Technical	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 40, Section 6.1.1		

4. The performance standards provided for the removal of soil and waste, and the subsequent assay, cannot be met with NDA assay equipment that has an MDC of 40 nCi/gram (design specifications). This may be satisfactory for characterizing RFP waste, but not soil. The design process has postponed addressing this NDA assay deficiency/uncertainty hoping that NDA technology would catch up to the basic project requirements. Information is the main product of Stage II and characterization data is a major part of this "information" product. Nothing in the NDA "arena" has changed significantly during the past four years that would provide some level of comfort relative to the possibility of reliable assay at the 10 nCi/gram TRU level. The project must accept the fact that a single NDA assay methodology will not satisfy both waste and soil objectives. Appropriate changes (most likely to be derived from the soil characterization trade study) should be embraced in the design philosophy and incorporated into the design.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder X: -C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3921
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Technical	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 43, Section 7.1		

5. It is not clear what is meant by "monitoring equipment" used to distinguish between soils with less than or equal to 10 nCi/gram TRU and those with > 10 nCi/gram. Is this the digface monitor or the assay equipment? It does not appear that the design currently embraces monitoring at the digface to assess soil TRU concentrations at these levels. It is a very worthwhile objective to have this capability and determine the usefulness of such monitoring during retrieval operations.

Response by Comment Processing CPT. As agreed to in the 10/2/00 Agency Face-to-Face Meeting, we recommend completing the Soils Trade Study within its current scope. [This is a consolidated response to comments 3921 (Binder I-A), 3933 (Binder II), 3934 (Binder III), 3960 (Binder XI-C), Binder 3962 (Binder XI-C), 3974 (Binder XVII), and 3988 (Binder I-A).]

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3922
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Technical	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 44, Section 7.1.2		

6. It is stated in the text that current fine assay DQOs require only that measurements be made as current state-of-the-art instrumentation allows. This is an unsatisfactory statement for a DQO. Project objectives, TFRs and SRDs clearly state requirements, and the DQO process and design should embrace these requirements. If there is a problem with the objectives or requirements, then the project direction should be modified. The project has put all their "eggs" in one basket (i.e. NDA assay for all materials retrieved). It is not necessary to use a single methodology to meet objectives. Alternatives exist.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3923
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Rad Safety	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 68, Section 8.4.3.1		

7. The MHC upper glovebox assembly provides an enclosed processing area where operators perform waste sizing and sampling using hand-held equipment and power tools. This approach was chosen to simplify operations and save on costs. However, extensive operations with power tools to size waste and drums in gloveboxes poses significant risk to workers. It is important that procedures, training and facility design mitigate these risks to workers to as low level as practicable. This is a major health and safety risk area.

Response by Comment Processing CPT. As agreed to in the 10/3/00 Agency Face-to-Face Meeting, no change to the design is required. This comment was provided as a caution. Any actions with regard to this comment would be addressed in the normal course of developing operating procedures and training.

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3924
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Technical	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 78, Section 8.5.2		

8.** The text states that the DFM represents significant technical risk to the project. However, it is not clear why the DFM represents significant technical risks to the project. The principal objective is to assess the fissile material content of the buried waste. A DFM system will never be a quantitative tool for the fissile material content of buried waste. It is an indicator and semi quantitative at best. Too many variables exist to expect accurate quantitation of fissile gram content (while waste is buried). The DFM is used in conjunction with a retrieval strategy based on batch control to provide nuclear criticality safe operations.

Response by Jim Rose. For clarity we recommend that this document be changed to replace the term "technical risk" with "programmatic/schedule risk". We also agree with the reviewer that the DFM can provide only an estimate of fissile material present in the digface and, since it is a well-developed technology, using gamma spectrometry is not a high technical risk. However, the application of the technology to Pit 9 waste does provide some risk in terms of its effectiveness as a criticality control tool. Unknowns associated with the volume and density of the wastes to be measured and the effects of quantities of other radionuclides that are present do have an impact on the uncertainties associated with the measurements. After the DFM is procured and delivered bounding measurements/testing are planned to assure criticality safety criteria can be met.

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3925
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Technical	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 84, Section 8.10		

9.** The digface monitor will not determine a gram equivalent Pu-239; it will provide an estimate of this value. This estimate (or bounding range) will be used to plan retrieval. Retrieval will be controlled and conducted in a batch mode. For the NDA of drums, achieving detection limits with state-of-the-art technology, with one methodology, is highly unlikely. The characterization of the waste should be separate from the characterization of the soil.

Response by Jim Rose. We recommend that this document be changed to reflect that the digface monitor will provide only an estimate of the Pu-239/fissile material present. Further, we agree that it is very difficult to obtain low detection limits with a single methodology using current detection methods, especially for wastes (as opposed to soils). However, it is been determined that gamma spectrometry provides the most information using a single technique. Characterization of either wastes or soils using the digface monitor is not currently in scope.

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3927
Document:	Binder II Process Definition and Data Needs Category: Technical		
Location:	DOE/ID-10731 Field Sampling Plan		
Comment:	Page 3-5, Section 3-1		

11. A number of DQO sections (particularly QS8 and QS9) pertain to the determination of TRU activity in soils. The assay of soils and the selection of appropriate methodology to achieve measurement objectives at 10 nCi/gram have not been adequately defined. Stating that the required detection level is "as achievable with current state of art" is not acceptable. As stated in previous comments pertaining to DQOs, FSP, design documents and assay system specifications, adequate methods are not specified to accomplish project objectives that pertain to the TRU assay of drums. Relative to the laboratory analysis of soil samples, the analytical method of choice should be gamma ray spectroscopy. Alpha spectroscopy should be used for confirmatory measurements and for a few specific nuclides not amenable to analysis by gamma spectroscopy. Gamma spectroscopy is a fast and nondestructive method that averages the content over a very large sample compared to alpha spectroscopy. The required detection level for alpha spectroscopy analysis of soils should be consistent with the method detection level (about 0.1 pCi/gram, see QAP Table 2-5).

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3928
Document:	Binder II Process Definition and Data Needs Category: Technical		
Location:	DOE/ID-10731 Field Sampling Plan		
Comment:	Page 4-10, Section 4.3.2.4		

12. About 1000 soil drums will require characterization. NDA assay is the current choice. However, achieving reliable detection at less than 10 nCi/gram TRU is not likely to be met. These drums should be characterized by an improved loading, sampling and sample analysis strategy that satisfies characterization objectives.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3929
Document:	Binder II Process Definition and Data Needs Category: Technical		
Location:	DOE/ID-10731 Field Sampling Plan		
Comment:	Page 4-10, Section 4.3.2.5		

13. This section discusses validating assay results. The current loading and sampling strategy will introduce a considerable uncertainty, and impact the correlation study. Improvement in the loading, sampling and sample analysis strategy will eliminate much of this uncertainty. In fact, the strategy will produce results more reliable than the NDA assay methodology (10 nCi/gram and below). For soil sample analyses, the gamma spectrometric is preferred for TRU characterization, with alpha spectrometric methods used to confirm or provide lower detection levels for specific nuclides.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3930
Document:	Binder II Process Definition and Data Needs Category: Technical		
Location:	DOE/ID-10731 Field Sampling Plan		
Comment:	Page 6-2, Section 6.2		

14. ** It is important that digface monitoring identify "free" Am-241. This high specific activity waste form can impact operations if contamination is spread about. This is a much more significant concern than Pu-239 from a contamination control standpoint. The RFP packaging and stabilization of the Am-241 is important in mitigating this concern, as is handling at the digface and MHC.

Response by Comment Processing CPT. The current DFM addresses criticality monitoring requirements. If CR-170 adds digface characterization requirements, solutions such as the reviewer's should be considered for implementing the new requirements. We agree that Am-241 is a significant concern for contamination control; the existing design was developed to mitigate this concern. If CR-170 is implemented, Am-241 data would be available to assist day-to-day retrieval planning. [This is a consolidated response to comments 3930 (Binder II), 3947 (Binder VI), and 3980 (Binder XVIII-A).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3931
Document:	Binder II Process Definition and Data Needs Category: Technical		
Location:	DOE/ID-10731 Field Sampling Plan		
Comment:	Page 6-6, Section 6.3.2.1		

15. It is stated that the collected soil will be dumped into the drum. How will this dumping process be controlled to minimize dust release and assist representative filling? Will the auger sampler handle the range of sampling from soil fines to 2 inch diameter chunks?

Response by Comment Processing CPT. As agreed to in the 10/3/00 Agency Face-to-Face Meeting: (1) We recommend modifying the Field Sampling Plan to describe how dust is controlled during soil drum loading. (2) We recommend that sample representativeness be addressed during the Soils Trade Study, and that changes to RD/RAWP documents would be based on the trade study results via Change Request 170.

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3932
Document:	Binder II Process Definition and Data Needs Category: Technical		
Location:	DOE/ID-10731 Field Sampling Plan		
Comment:	Page 6-9, Section 6.5		

16. It is stated that the archive sample will be contained in a glass 250-ml bottle. To minimize handling and simplify TRU characterization, samples should be placed directly in containers that are consistent with the geometry requirements for gamma spectrometric TRU measurements. Use glass bottles to meet waste characterization requirements (organics, etc.), but use plastic containers for radionuclides measurements.

Response by Mark Borland. We recommend not pursuing the action proposed in the comment. The planned approach for sample analysis is the use the Analytical Laboratory department at INTEC of the INEEL. This lab will perform both radiological and chemical analysis. Using one sample container greatly simplifies sample processing including packaging, transportation handling, and data management. The proposed approach would essentially double the number of samples collected. If radiological analyses were to be performed at a different location than the chemical analyses, then the proposed change to sample containers would have technical merit.

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Document: Binder II Process Definition and Data Needs Category: Technical

Location: Review and Comments

Comment: General

17. The resolution of a number of comments pertaining to sampling and analysis strategies was deferred to a trade study. The trade study was to consider various options necessary to meet soil segregation and characterization requirements. The trade study has not been completed. Important considerations were NDA assay of soil entering drums, automatic sample splitting between hopper and drum, and/or an improved loading and sampling strategy for soil drums. It is necessary to complete this trade study to finalize the design.

Response by Comment Processing CPT. As agreed to in the 10/2/00 Agency Face-to-Face Meeting, we recommend completing the Soils Trade Study within its current scope. [This is a consolidated response to comments 3921 (Binder I-A), 3933 (Binder II), 3934 (Binder III), 3960 (Binder XI-C), Binder 3962 (Binder XI-C), 3974 (Binder XVII), and 3988 (Binder I-A).]

EPA Reviewer: Jim McHugh Significant? Yes Comment # **3934**

Document: Binder III Cmt Res- SII Prces/Defn & Env Category: Technical

Location: Docs

Comment Resolutions

Comment: General

18. The resolution of a number of comments pertaining to digface monitoring, sampling and analysis strategies was deferred to a trade study. It is necessary to complete this trade study to finalize the design.

Response by Comment Processing CPT. As agreed to in the 10/2/00 Agency Face-to-Face Meeting, we recommend completing the Soils Trade Study within its current scope. [This is a consolidated response to comments 3921 (Binder I-A), 3933 (Binder II), 3934 (Binder III), 3960 (Binder XI-C), Binder 3962 (Binder XI-C), 3974 (Binder XVII), and 3988 (Binder I-A).]

EPA Reviewer: Jim McHugh Significant? Yes Comment # **3936**

Document: Binder V Env/Saf/Q Docs Category: Technical

Location: DOE/ID-10790 Pollution Prevention/Waste Minimization Plan

Comment: Page 3-13, Section 3.2.5

20. The auger sampler should always be surveyed/swiped for radiological contamination, and the "cleanliness state" based on results of the survey. Visual observations are not satisfactory to determine the cleanliness of the sampling device.

Response by Brent Burton. We recommend that the language in this document be revised to ensure consistency with the language in section 6.3.3.3 of the FSP.

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Printed:

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3937
Document:	Binder V Env/Saf/Q Docs	Category: Technical	
Location:	DOE/ID-10790 Pollution Prevention/Waste Minimization Plan		
Comment:	Page 3-13, Section 3.2.6		

21. The ability of the proposed assay system to reliably determine waste/soil TRU content at 10 nCi/g has not been demonstrated. Since this is the case, the project should not be relying on the assay system to make TRU classification decisions for materials containing low concentrations of TRU (especially soils).

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3938
Document:	Binder V Env/Saf/Q Docs	Category: Editorial	
Location:	DOE/ID-10790 Pollution Prevention/Waste Minimization Plan		
Comment:	Page 3-14, Section 3.2.6		

22. The quantity defined as 200 nCi/g should read 200 grams fissile material. The repackaging is based on exceeding 200 grams of fissile equivalent material.

Response by Jim Rose. We recommend incorporating the proposed change. The quantity 200 nCi/g should be 200 grams.

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3939
Document:	Binder V Env/Saf/Q Docs	Category: Technical	
Location:	DOE/ID-10790 Pollution Prevention/Waste Minimization Plan		
Comment:	Page 3-15, Section 3.2.7.1		

23. The ability of the proposed assay system to reliably determined waste/soil TRU content at 10 nCi/g has not been demonstrated. Since this is the case, one should not be relying on the assay system to make TRU classification decisions for materials containing low concentrations of TRU (especially soils).

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? No	Comment # 3935
Document:	Binder V Env/Saf/Q Docs	Category: Technical	
Location:	DOE/ID-10790 Pollution Prevention/Waste Minimization Plan		
Comment:	Page 3-5, Section 3.2.1.1.2		

19. The gamma radiation detection monitor described here for the digface does not appear to be entirely consistent with the technical descriptions provided in the design documents for the digface monitoring equipment.

Response by Jim Rose. Since the write-up given in Section 3.2.1.1.2 can be misinterpreted, we recommend this section be re-written to be more consistent with the technical descriptions provided in other design documents.

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Response Report - sorted by Org/Reviewer

 Printed:
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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3940
Document:	Binder V Env/Saf/Q Docs	Category: Rad Safety	
Location:	EDF-ER-168 Radiological Control		
Comment:	Page 1/RAE		

24. The Stage II document states that the ventilation system design for the RAE provides sufficient capacity and proper flow pattern to prevent the spread and build up of loose surface and airborne contamination. The nature of the operations and the digface monitoring, and the handling of high specific alpha activity materials are important considerations in this assessment. For example, handling breached waste containers containing "free" Am 241 pose significantly greater risk to spread of contamination than the other radionuclides in the waste. This also has significant implications regarding ALARA for retrieval operations and future decommissioning. Flexibility to control airflow patterns and capture materials at the source is an important design consideration. One may also need local/recirculation HEPA filters at the digface to capture materials during critical handling operations. Radiological Engineering must continually evaluate this aspect of the operation as it develops.

Response by Comment Processing CPT. As agreed to in the 10/2/00 Agency Face-to-Face Meeting, we recommend reviewing the design for its ability to accommodate the addition of local recirculation HEPA filtering at the digface. Necessary interfaces and capabilities should be identified. Any necessary design changes should be handled via the CR process.

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3941
Document:	Binder V Env/Saf/Q Docs	Category: Technical	
Location:	INEEL/EXT-2000-000690 Preliminary Criticality Safety Evaluation		
Comment:	Page 4, Table 1		

25. Table 1 lists maximum Pu content (single drum basis) for the waste types expected in the Stage II. These data are taken from the RFP shipping records. Many examples have been observed of RFP shipping records significantly underestimating Pu content. For example, the Kudera report shows an average 190 grams per drum for graphite materials, with a reasonable likelihood of encountering a drum of this waste with > 1 kg Pu. Using RFP shipping records to determine an upper bound to the Pu content of waste forms (especially from this waste disposal era) is misleading without a complete discussion of uncertainties.

Response by Todd Taylor. Because the potential for an overloaded drum exists, a means to identify the package must be used prior to disturbing the waste. The 1 kg value was developed based on NDA data obtained for above-ground waste and shipping data describing the waste types in the 40 x 40 area. It is recognized that the potential exists for greater than 1 kg quantities, but the result is the same: a digface monitor is required to identify unsafe masses. In the 10/2/00 Agency Face-to-Face Meeting it was agreed to hold a meeting to discuss and resolve criticality issues. We recommend this topic be part of the agenda for that meeting. [This is a consolidated response to comments 3941 (Binder V), 3942 (Binder V), and 3943 (Binder V).]

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Response Report - sorted by Org/ReviewerPrinted:
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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3943
Document:	Binder V Env/Saf/Q Docs	Category: Technical	
Location:	INEEL/EXT-2000-000690 Preliminary Criticality Safety Evaluation		
Comment:	Page 5, Section 2.1		

27. The probability of encountering an overloaded drum is most likely low based on the number of waste drums and the estimated total Pu content of the waste. Using just the RFP waste records, and post 1970 RFP waste and INEEL NDA data, to define upper bounds to the fissile material content of waste drums, does not adequately address a "worst case" scenario. One must consider the particular waste and project/estimate uncertainties in RFP waste records. Large uncertainties exist in the quantities of Pu in RFP waste, as can be seen by comparing the Table 2 fissile material value with the RFP declared value. Waste reduction, recovery and accountability methods improved over the years; therefore, waste drums in the '50s and '60s should be considered more suspect.

Response by Todd Taylor. Because the potential for an overloaded drum exists, a means to identify the package must be used prior to disturbing the waste. The 1 kg value was developed based on NDA data obtained for above-ground waste and shipping data describing the waste types in the 40 x 40 area. It is recognized that the potential exists for greater than 1 kg quantities, but the result is the same: a digface monitor is required to identify unsafe masses. In the 10/2/00 Agency Face-to-Face Meeting it was agreed to hold a meeting to discuss and resolve criticality issues. We recommend this topic be part of the agenda for that meeting. [This is a consolidated response to comments 3941 (Binder V), 3942 (Binder V), and 3943 (Binder V).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3942
Document:	Binder V Env/Saf/Q Docs	Category: Technical	
Location:	INEEL/EXT-2000-000690 Preliminary Criticality Safety Evaluation		
Comment:	Page 5, Table 2		

26. The data cited in the text are the result of the INEEL NDA evaluation of post 1970 RFP waste drums. The waste disposal practices at the RFP changed considerably from the *50s to the *70s. Utilizing these recent data without discussion of the significant differences in waste handling practices prior to the *70s is misleading. Also, are the waste codes consistent between the *50s, 60*s and *70s? The waste code stated for the drum with a maximum measured fissile mass of 1,138 grams is code 393, not 376. This is a slag material type waste drum. This particular drum lists 81 pounds as the net weight of waste. Using the Pu maximum content value listed in the table, this equates to an average Pu concentration of 3.1 %. Also, this particular drum contains 60 % void space. These are important factors to be considered in a nuclear criticality safety evaluation of buried fissile waste material. Waste drums are not always filled to capacity, and the Pu is not uniformly distributed.

Response by Todd Taylor. Because the potential for an overloaded drum exists, a means to identify the package must be used prior to disturbing the waste. The 1 kg value was developed based on NDA data obtained for above-ground waste and shipping data describing the waste types in the 40 x 40 area. It is recognized that the potential exists for greater than 1 kg quantities, but the result is the same: a digface monitor is required to identify unsafe masses. In the 10/2/00 Agency Face-to-Face Meeting it was agreed to hold a meeting to discuss and resolve criticality issues. We recommend this topic be part of the agenda for that meeting. [This is a consolidated response to comments 3941 (Binder V), 3942 (Binder V), and 3943 (Binder V).]

Response Report - sorted by Org/Reviewer

10/30/00

EPA	Reviewer: Jim McHugh	Significant? No	Comment #	3944
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Document: Binder V Env/Saf/Q Docs

Category: Project Objectives

Location: INEEL/EXT-2000-000690 Preliminary Criticality Safety Evaluation

Comment: Page 6, Section 2.2.2

28. This section infers considerable sampling at the digface. It is stated that samples of waste/material and soil will be collected for further analyses after the digface monitor has scanned the surface and Pu radiation levels are determined. Is this consistent with the Sampling and Analysis Plan?

Response by Mark Borland. We recommend incorporating the proposed change into the solution. The CSE is correct in stating samples will be collected from grid locations following digface monitor scanning. The inference that a sample will be collected from every grid location is incorrect and not intended. Only biased and random grid locations identified in the Field Sampling Plan will be sampled. We recommend revising the text of the Criticality Safety Evaluation to clarify the sampling approach consistent with the Field Sampling Plan.

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment #	3945
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Document: Binder V Env/Saf/Q Docs

Category: Technical

Location: INEEL/EXT-99-00013 Preliminary Safety Assessment

Comment: Page 6-1, Section 6.3

29. What is the justification that the frequency of encountering waste drums containing > 200 grams Pu is equal in the '50s, '60s and '70s waste disposal eras? Do the 17,000 drums represent this total time period? It is my understanding that these data represent more recent (i.e. 1970 and beyond) waste packages.

Response by Rod Peatross. We recommend a minor revision to the PSA to address the applicability of the post 70 data to buried waste.

EPA	Reviewer: Jim McHugh	Significant? No	Comment #	3946
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Document: Binder V Env/Saf/Q Docs

Category: Technical

Location: INEEL/EXT-99-00013 Preliminary Safety Assessment

Comment: Page 6-2, Section 6.3

30. The digface fissile material monitor is described as a rectangular neutron detection assembly. The current design involves gamma ray spectroscopy and HPGe detectors. Also, it is stated that use of water in fighting fires is not a concern (i.e. criticality unlikely). Data from the INEEL NDA on the characterization of drums indicates a drum with 60 percent void space, > 1 kg Pu, and a Pu average concentration of 3.1% in the waste material. Has a partially filled drum with significant void space and large quantities of Pu been evaluated relative to water introduction and reflection? These are important factors to be considered in a nuclear criticality safety evaluation of buried fissile waste material and the retrieval of this material. Using averages can get one into trouble.

Response by Todd Taylor. The Criticality Safety Analysis has considered parameters such as mass, geometry, concentration, and moderation. Partially filled drums with void and significant amounts of Pu have been evaluated. Average fissile mass and concentration have not been used to bound potential criticality hazards. In the 10/2/00 Agency Face-to-Face Meeting it was agreed to hold a meeting to discuss and resolve criticality issues. We recommend that this topic be discussed at the meeting.

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Printed:
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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3947
Document:	Binder VI Misc Docs	Category: Technical	
Location:	EDF-ER-175, MHC and DFM Characteristics and Capabil		
Comment:	Page 1, Summary		

31. It is concluded that gamma ray detection techniques using germanium detectors are the preferred approach to digface and MHC drum fill monitoring. No discussion is provided on the use of the germanium detectors for Am 241 monitoring. It is stated in other documents that the gamma monitoring will involve both high-energy and low-energy regions of the spectrum. Optimizing the digface monitor to evaluate soil content using the 60 keV Am 241 emission could save considerable effort characterizing overburden (use the standard in situ gamma spectroscopy methodology).

Response by Comment Processing CPT. The current DFM addresses criticality monitoring requirements. If CR-170 adds digface characterization requirements, solutions such as the reviewer's will be considered for implementing the new requirements. We agree that Am-241 is a significant concern for contamination control; the existing design was developed to mitigate this concern. If CR-170 is implemented, Am-241 data would be available to assist day-to-day retrieval planning. [This is a consolidated response to comments 3930 (Binder II), 3947 (Binder VI), and 3980 (Binder XVIII-A).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3948
Document:	Binder VI Misc Docs	Category: Technical	
Location:	EDF-ER-175, MHC and DFM Characteristics and Capabil		
Comment:	Page 3, Section 2.0		

32. Drum fill monitoring at the MHC use 2 HPGe detectors to monitor a drum as it is being filled. The fixed location of the detectors and stationary drum result in large uncertainties relative to a segmented gamma scanner. A single germanium detector monitoring the waste (within the MHC) in small volume increments, prior to placing it in the drum, would provide a better estimate of drum fissile material loading. One could create a more favorable geometry involving a smaller volume compared to a total drum volume. This increased accuracy would eliminate the need for a segmented gamma scanner to provide the better estimate of loading. The assay system would provide the required accuracy for the fissile material content. Two detector systems in the MHC would replace the five or six detectors presently planned. The equipment savings could be directed toward the SHC, and provide monitoring during fill in a way that provides reliable soil characterization at 10 nCi/gram. [See also UCN # 3977.]

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

OU 7-10 Staged Interim Action Project, Stage II, Title II **Response Report - sorted by Org/Reviewer**

Printed:
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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3949
Document:	Binder VII-A O&M Plan & App A-F	Category: Rad Safety	
Location:	O&M Plan-678		
Comment:	Page 9, Section 3.5.1.11		

33. Generally it is not the radcon engineer that performs these duties. It is the radcon technician.

Response by Dave Everett. We recommend deleting the word "Engineer" and replacing it with the word "Technician" This action would result in properly identifying the group responsible for performing the described work activities.

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3950
Document:	Binder VII-B App G	Category: Quality	
Location:	O&M Plan-678, Appendix G, Training Plan		
Comment:	Page B1, Appendix B		

34. The experience requirements cited in the text for operators and technicians are weak for such a sensitive radiological undertaking. This may be a nonreactor nuclear facility, but the system concepts are new and radiological consequences are not trivial.

Response by Patricia Jurbala. We recommend not pursuing the action proposed in the comment because the minimum experience complies with DOE Order 5480.20A, "Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities". Stringent qualification requirements for personnel working in radiological control areas are found in PRD-183, "INEEL Radiological Control Manual", and fully comply with the requirements of 10 CFR 835. A complete program description is found in the INEEL Radiation Control Manual (e.g., Part 4).

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3951
Document:	Binder VII-D App P	Category: Technical	
Location:	O&M Plan-678, Appendix P, DOE/ID-107773, Operations Requirements Document (ORD)		
Comment:	Page 21, Section 3.1.5.2		

35. The statement that "a TRU constituent level of 10 nCi/gram for the population of drums to be returned to the pit has been identified" is not consistent with TSRs, SRDs and statements made in numerous sections of the RD/RA Work Plan.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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Response Report - sorted by Org/Reviewer

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3952
Document:	Binder XI-B SDD-21 ERS	Category: Technical	
Location:	SDD-21, INEEL/EXT-2000-00259, Stage II, ERS - SDD		
Comment:	Page 17, Section 3.1.2.4.2		

36. The strategy of sizing items at the digface needs to be discussed in more detail. The sizing of waste forms at the digface must be minimized to avoid cross contamination and release of contaminants to the environs. Why would one want to cut up intact, lined, standard 55-gallon drums? Does the project intend to perform such an operation at the digface? At one time, the use of overpack containers was discussed. What are the current plans for overpacks?

Response by Daryl Lopez. We recommend incorporating the proposed change into the solution. Each intact drum from the digface will actually be placed in an ITM and transferred to the MHC for disposition. Reference to intact drum cutting would be removed from Section 3.1.2.4.2. Sizing at the digface will only be done if an item cannot fit into an ITM or through the MHC door. The MLA can handle 83-gal overpack drums and scan them, but the final assay station may not be able to handle them, depending on the assay station subcontractor.

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3953
Document:	Binder XI-C SDDs	Category: Technical	
Location:	SDD-22, INEEL/EXT-2000-00260, Stage II, MHC - SDD		
Comment:	Page 35, Section 4.1.1.1.1.5		

37. This section states that electrical power connections are provided for sizing and characterization equipment. Provision should also be made to provide electrical connections to hand-held detectors for characterization flexibility within the MHC glovebox. These would be signal/high-voltage feed-thru for various detector types (a standard feed-through will handle most common detectors).

Response by Comment Processing CPT. Per the 10/3/00 Agency Face-to-Face Meeting: We recommend reviewing the design (including DAMS) for its ability to accommodate portable instruments, and revising the RD/RAWP package as needed to accommodate them. We also recommend addressing contingent operations for use portable instruments in the Phase II O&M Plan. If it is determined later that portable instruments are distinctive to the retrieval process we recommend further evaluation of the design and incorporation of any needed changes. [This is a consolidated response to comments 3953 (Binder XI-C), 4033 (Binder XI-E) and 4034 (Binder XI-E).]

EPA	Reviewer: Jim McHugh	Significant? No	Comment # 3954
Document:	Binder XI-C SDDs	Category: Editorial	
Location:	SDD-22, INEEL/EXT-2000-00260, Stage II, MHC - SDD		
Comment:	Page 96, Appendices		

38. No references are provided to location of these appendices.

Response by James Case for Carol Reid. We recommend addition of further explanation of the absence of the Appendices. The Appendices are included in the SDDs as a placeholder per the format dictated by MCP-3572.

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3956
Document:	Binder XI-C SDDs	Category: Technical	
Location:	SDD-23, INEEL/EXT-2000-00261, Stage II, SS - SDD		
Comment:	Page 10, Section 3.1.2		

40. The proposed mobile assay unit will not be able to directly evaluate all the radionuclides mentioned in this section. The measurement uncertainty and MDC are not consistent with the reliable segregation of drums at 10 nCi/gram. Is the MDC specified for each radionuclide, or is it specified for total TRU? What is the required confidence level associated with the MDC? The DRDs that are referenced are not consistent with TFRs and SRDs. A design requirement document (or changes to DRDs) need to meet established base requirements. As the design proceeds, there should be no "retrofitting" of the design requirements to meet what is convenient.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3957
Document:	Binder XI-C SDDs	Category: Technical	
Location:	SDD-23, INEEL/EXT-2000-00261, Stage II, SS - SDD		
Comment:	Page 22, Section 4.1.1.5		

41. The NDA assay methodology is satisfactory for characterizing RFP waste materials. However, based on expected performance, alternatives should be employed for soil characterization. Soil represents a large volume of material that will be less than or equal to 10 nCi/gram. Applying a 100 nCi /gram tool to characterize soil is unrealistic considering project objectives. Realistic alternatives exist and these must be embraced in the design. [See also UCN # 3955.]

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment #	3955
Document:	Binder XI-C SDDs	Category: Technical		
Location:	SDD-23, INEEL/EXT-2000-00261, Stage II, SS - SDD			
Comment:	Page 8, Section 3.1.1.2			

39. The statement "a TRU constituent level of 10 nCi/gram for the population of drums to be returned to the pit has been identified" is not correct. Returning drums to the pit is based on the characterization of single drum contents; the decision to return is based on these single drum results, not a population average. The NDA assay methodology to accomplish this requirement has not been demonstrated, and may remain a major technical obstacle. NDA assay for waste is acceptable using best available technology; however, utilizing NDA assay for soil is not acceptable (without a NDA assay demonstrated capability). This major volume of material should be characterized by an alternative method (suggestions presented in other comments). [See also UCN # 3957.]

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment #	3958
Document:	Binder XI-C SDDs	Category: Technical		
Location:	SDD-24, INEEL/EXT-2000-00262, Stage II, CIS - SDD			
Comment:	Page 25, Section 4.1.1			

42. It is stated in the text that the DFM must be able to distinguish between 60 keV gamma rays emitted from Am 241, and other high-energy gamma rays, as the it is deployed by the ROCS. This capability is desirable; however, it is not clearly stated in other DFM design documents. The purpose, operation, and data output of the DFM needs to be clearly defined and consistent throughout all design documents.

Response by James Case. We recommend that documentation be clarified as proposed.

Response Report - sorted by Org/Reviewer

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3959
Document:	Binder XI-C SDDs	Category: Technical	
Location:	SDD-24, INEEL/EXT-2000-00262, Stage II, CIS - SDD		
Comment:	Page 30, Section 3.1.2		

43. As stated in Section 3.1.1, the MHC fissile monitoring subsystem is designed to ensure, within a 95 percent confidence level, that drums filled with excavated waste from pit 9 do not contain more than 200 grams of weapons-grade plutonium before the drums are removed from the MLA. If this is the case, why is an independent drum monitoring station required?

Response by James Case. We recommend clarifying the document according to the following explanation: Section 3.1.1 of the CIS SDD does in fact state that the MHC fissile monitoring subsystem will ensure within a 95% confidence level that filled drums do not contain more than 200 grams of weapons-grade plutonium; however, the fissile monitoring subsystem also includes the Independent Drum Monitoring Station. The fill monitors at the MLA are designed to provide an estimate only. The Independent Drum Monitoring Station will provide a 95% confidence measurement.

EPA	Reviewer: Jim McHugh	Significant? No	Comment # 3964
Document:	Binder XI-C SDDs	Category: Editorial	
Location:	SDD-26, INEEL/EXT-2000-00267, Stage II, SHC - SDD		
Comment:	Page 102, Appendices		

48. No references are provided to locate the Appendices.

Response by James Case for Carol Reid. We recommend addition of further explanation of the absence of the Appendices. The Appendices are included in the SDDs as a placeholder per the format dictated by MCP-3572.

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3961
Document:	Binder XI-C SDDs	Category: Technical	
Location:	SDD-26, INEEL/EXT-2000-00267, Stage II, SHC - SDD		
Comment:	Page 28, Section 4.1.1.1.1		

45. The cartridge filters are rated as high-efficiency filters. The integrity of these filters must be maintained through out the operation to avoid contamination of the vacuum pump and adding airborne contamination to the RAE. What methods are employed to ensure these objectives are met? [See also UCN # 3975]

Response by Bob Carpenedo. We recommend further evaluation of a control method to shut down the vacuum based on filter status. The design, as submitted, provides for detection of blocked filters. The proposed action on detection of filter failure would be to shut the vacuum system off.

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 Printed:
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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3962
Document:	Binder XI-C SDDs	Category: Technical	
Location:	SDD-26, INEEL/EXT-2000-00267, Stage II, SHC - SDD		
Comment:	Page 61, Section 4.1.4.1		

46. Since the requirements of the SVS are to handle 2 in. diameter clumps/rocks, the auger sampler must deal with this "granularity" in the container. Will the auger sampler push the clump aside, or grinder it up? If it pushes it aside, it is not handling all materials in a representative way. This supports the need for a grinder/homogenizer for soil entering a drum.

Response by Comment Processing CPT. As agreed to in the 10/2/00 Agency Face-to-Face Meeting, we recommend completing the Soils Trade Study within its current scope. [This is a consolidated response to comments 3921 (Binder I-A), 3933 (Binder II), 3934 (Binder III), 3960 (Binder XI-C), Binder 3962 (Binder XI-C), 3974 (Binder XVII), and 3988 (Binder I-A).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3963
Document:	Binder XI-C SDDs	Category: Technical	
Location:	SDD-26, INEEL/EXT-2000-00267, Stage II, SHC - SDD		
Comment:	Page 89, Section 4.4.2.9		

47. It is stated in the text that humidity controls are not installed to regulate humidity within glovebox systems. Without humidity control, a problem can develop on very dry days (e.g. wintertime conditions) with finely divided particles and static electricity charges. Such conditions can disburse contamination within the enclosure and increase cleanup operations.

Response by Comment Processing CPT. As discussed in the 10/3/00 Agency Face-to-Face Meeting, we recommend performing a survey of other facilities to see if they implement humidity controls in gloveboxes. The results of the survey would be documented in an EDF. Follow-on action would depend on the outcome of the survey.

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3960
Document:	Binder XI-C SDDs	Category: Technical	
Location:	SDD-26, INEEL/EXT-2000-00267, Stage II, SHC - SDD		
Comment:	Page 9, Section 3.1.2.2		

44. The soil handling center (SHC) provides sampling consistent with the current FSP. Soil sampling is the method most likely to satisfy the soil characterization objective at 10 nCi/gram (i.e. not NDA assay). Therefore, it is necessary to modify the FSP and ensure that the loading and sampling strategy for soil drums provides for reliable characterization of the drum contents. A grinder/homogenizer and distributor in series with the hopper to drum path, and additional core sampling of a drum (collecting 1.5 to 2.0 kg of soil), will provide adequate assurance of representative sampling for this large volume of material. Gamma spectroscopy analysis of three core samples from each drum is a fast and reliable NDA method. This will ensure that requirement for characterizing and segregating drums to less than or equal to 10 nCi/gram can be achieved. [See also UCN # 3962.]

Response by Comment Processing CPT. As agreed to in the 10/2/00 Agency Face-to-Face Meeting, we recommend completing the Soils Trade Study within its current scope. [This is a consolidated response to comments 3921 (Binder I-A), 3933 (Binder II), 3934 (Binder III), 3960 (Binder XI-C), Binder 3962 (Binder XI-C), 3974 (Binder XVII), and 3988 (Binder I-A).]

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment #	3965
Document:	Binder XIX Storage Part II		Category: Technical	
Location:	EDF-ER-054, Stage II, Non-Destructive Assay System Capabilities EDF			
Comment:	Page 3, Table			

49. The MDCs quoted by the vendors do not meet, or are very optimistic relative to, soil assay objectives. The project must be very careful in using these data to justify the assay methodology for soil characterization.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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Printed:
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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3966
Document:	Binder XIX Storage Part II	Category: Technical	
Location:	EDF-ER-129, INEEL/EXT-2000-00044, Stage II, Avg Conc Vs. Measured Cutoff Conc for Assay Ops		
Comment:	Page 1, Summary		

50. This assessment for shallow land burial of waste is based on the assumed overall requirement that the average transuranic concentration of the waste/soil must not exceed 10 nCi/gram at the 95 percent confidence level. This assumption is not correct, and should not be applied to an ensemble of waste/soil packages, or applied to an in situ disposal area situation. The volume to be characterized is an individual package (55-gallon drum). The requirement applies to the individual drum, not the collection of drums or large waste volumes. This fact is defined in project requirements. The assay system is not intended to be a screening tool, but intended to provide reliable characterization data on each individual drum, such that the segregation objectives of less than or equal to 10 nCi/gram, 10 to 100 nCi/gram, and > 100 nCi/gram can be met. If these objectives cannot be met with the proposed assay system, an alternative methodology needs to be employed (especially for soil, which presents the greatest volume of material).

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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Response Report - sorted by Org/Reviewer		

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3968
Document:	Binder XIX Storage Part II		
Location:	EDF-ER-129, INEEL/EXT-2000-00044, Stage II, Avg Conc Vs. Measured Cutoff Conc for Assay Ops		
Comment:	Page 10, Section 6.0		

52. Accepted characterization methodologies do not require assumptions relative to the expected distribution of excavated soil. Screening a large number of soil drums with the proposed assay tool is a poor use of time and money, and provides no useful characterization data. One can easily characterize a soil drum to less than 1 nCi/gram TRU by modifying drum loading and sampling strategies. This methodology should be embraced for soil characterization and return-to-pit decisions. As stated in this summary section, the conclusions relate to the expected use of the assay system as a screening method, not a characterization method. Individual drum characterization requires the MDC be less than 10 nCi/gram TRU. The drum assay requirements for soil, or alternate methodology, must demonstrate a 3 nCi/gram TRU MDC at 95 percent confidence level to provide reliable quantitation results for drum segregation at 10 nCi/gram. The assay system is not intended to be a screening tool; it provides an important characterization function for TRU concentrations near 100 nCi/gram.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3967
Document:	Binder XIX Storage Part II	Category: Technical	
Location:	EDF-ER-129, INEEL/EXT-2000-00044, Stage II, Avg Conc Vs. Measured Cutoff Conc for Assay Ops		
	Page 10, Section 6.0		

Comment:

51. Using a criterion that the average TRU meets a particular value for a large volume of waste/soil is not consistent with accepted practice. If one takes the concept of averaging literally, it means one can bury/return to the pit anything as long as the average is satisfied. Taking this a step further, one could simplify the overall Pit 9 operation by removing only waste containers and leaving all soil behind (or return soil without analysis). This soil volume could contain about 2 kg of Pu and still satisfy the less than 10 nCi/gram criterion. One only needs a retrieval process that recovers waste items; this should guarantee that > 90 percent of the Pu has been recovered. Soil characterization would not be necessary because the Pu is associated with waste materials and one could statistically show the average has been satisfied. This is an example of how far one can take the concept of averaging.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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Response Report - sorted by Org/Reviewer		

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3969
Document:	Binder XIX Storage Part II	Category: Technical	
Location:	SPC-245, Stage II -- Nondestructive Assay Service		
Comment:	Page 1, Section 1.0		

53. The mobile characterization services for nondestructive assay specify a 55 gallon drum container. Does this mean that drum over packs will not be used? There were discussions in the past that the assay system be capable of handling over packs. What is the justification for this change, and how much additional sizing and handling of drums will be required? Where will this sizing take place (at the digface or MHC)? The desire should be to minimize waste sizing at the digface.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? No	Comment # 3970
Document:	Binder XIX Storage Part II	Category: Technical	
Location:	SPC-245, Stage II -- Nondestructive Assay Service		
Comment:	Page 2, Section 1.2.1		

54. The maximum weight of waste/soil containers is listed as 800 pounds. In other documents, a quantity of 700 pounds was used for containers. There appears to be a lack consistency.

Response by Doug Morrell. The 800 pound specification flows from Design Requirements Document (DRD) Volume 7 (see Binder IV-B), section 3.7.4.12. The 800 pounds was specified in the DRD to provide a capacity margin.

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3971
Document:	Binder XIX Storage Part II	Category: Technical	
Location:	SPC-245, Stage II -- Nondestructive Assay Service		
Comment:	Page 2, Section 1.3		

55. The system requirements as defined in this section are satisfactory for waste materials, but not satisfactory for soil. The specified measurement uncertainty and MDC are not consistent with segregating drums containing less than or equal to 10 nCi/gram TRU per drum. Also, the throughput rate should be defined at the required MDC.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3972
Document:	Binder XIX Storage Part II	Category: Technical	
Location:	SPC-245, Stage II -- Nondestructive Assay Service		
Comment:	Page 9, Section 3.3.4		

56. The requirement that the assay report contain only those radionuclides that contribute 95 percent of a total activity is not a useful requirement for this project. For example, a situation could exist where the container contains one gram of "free" Am 241, 10 grams Pu 239 and 100 grams U 235. The total activity would be dominated by the Am 241, and that may be the only radionuclide listed in the assay report (using this specification requirement).

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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Printed:
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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3973
Document:	Binder XVI-C MHC	Category: Technical	
Location:	EDF-ER-139, Stage II Material Handling Process Confinement-Design Option Trade Study		
Comment:	Page 1/Summary		

57. This trade study selected "the small manual concept" as the preferred alternative. The current design concept does not appear consistent with this alternative. What trade study or other mechanism moved the design to its current configuration?

Response by Mark Borland. We recommend not pursuing the action implied in the comment. The design is consistent with the trade study description for the small manual concept. The features described for the small manual concept in Section 4.4 of EDF-ER-139 include: 1) a single room for all work activities, 2) direct loading from the digface (no transfer tunnel), 3) one 55-gal and one 85-gal drum port, 4) overhead hoist, gloveports and manipulator for work efforts. The cost estimate for the small manual concept (Appendix C of EDF-ER-139) is based on a 15 inches long by 6 inches high by 5 inches wide cell with an overhead crane, z-mast manipulator, and 12 windows with gloveports. The features and size of the Title-II glovebox design as well as internal equipment are consistent with these descriptions.

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3974
Document:	Binder XVII SHC	Category: Technical	
Location:	Appendix A to Specification SPC-151, Stage II, SHC, Soil Vacuum System Requirements		
Comment:	Page A31/5.2		

58. To improve characterization and representative sampling, a soil grinder and distributor should be considered to reduce large chunks and distribute soil more uniformly in the drum. The system could be designed to minimize dust generation in the loading operation.

Response by Comment Processing CPT. As agreed to in the 10/2/00 Agency Face-to-Face Meeting, we recommend completing the Soils Trade Study within its current scope. [This is a consolidated response to comments 3921 (Binder I-A), 3933 (Binder II), 3934 (Binder III), 3960 (Binder XI-C), Binder 3962 (Binder XI-C), 3974 (Binder XVII), and 3988 (Binder I-A).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3975
Document:	Binder XVII SHC	Category: Technical	
Location:	Appendix A to Specification SPC-151, Stage II, SHC, Soil Vacuum System Requirements		
Comment:	Page A38/5.4.1.1.3		

59. Failure of the filter could introduce contamination to the vacuum pump and the RAE. How will the system detect a filter failure? Will there be a second line of defense to mitigate such a failure? [See also UCN # 3961]

Response by Bob Carpenedo. We recommend further evaluation of a control method to shut down the vacuum based on filter status. Currently there is no means of detecting filter failure (loss of pressure). The vacuum goes into a bypass mode on blockage of the filter (high delta pressure). The design would not include a second line of defense for such a failure. See also response to comment #3961.

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3976
Document:	Binder XVIII-A CIS	Category: Technical	
Location:	EDF-ER-144 Electrical Cooling vs. Liquid Nitrogen		
Comment:	Page 4		

60. The decision to utilize electrically cooled digface monitor detectors did not properly weigh the advantages and disadvantages. This decision should be re-evaluated with more careful attention to the liabilities that can impact project objectives. The concern for internal contamination of the liquid nitrogen cooled detector shows a lack of understanding relative to filling, detector cooling and the impact of contamination. In addition to reliability, the compressor system can present a much more significant problem. The digface monitor may have to operate at more than 10 degrees off level. This restriction posed by the compressors is not consistent with the flexibility needed at the digface. The cooling decision must be re-evaluated and a more comprehensive view of the overall situation considered. The operation of more electrical equipment at the digface, using air cooling fans, is a major detriment. [See also UCN # 3978.]

Response by Comment Processing CPT. We recommend performing a study to evaluate changing DFM cooling to liquid nitrogen, followed by modifying the design if appropriate. [This is a consolidated response to comments 3976 (Binder XVIII-A) and 3978 (Binder XVIII-A).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3977
Document:	Binder XVIII-A CIS	Category: Technical	
Location:	EDF-ER-175 MHC and DFM Charact. and Capabilities		
Comment:	Page 1/ Summary		

61. Comments on the material presented in this EDF would be identical to the comments provided for same EDF contained in Binder VI. [Cross ref. With UCN # 3948.] [32. Drum fill monitoring at the MHC uses 2 HPGe detectors to monitor a drum as it is being filled. The fixed location of the detectors and stationary drum result in large uncertainties relative to a segmented gamma scanner. A single germanium detector monitoring the waste (within the MHC) in small volume increments, prior to placing it in the drum, would provide a better estimate of drum fissile material loading. One could create a more favorable geometry involving a smaller volume compared to a total drum volume. This increased accuracy would eliminate the need for a segmented gamma scanner to provide the better estimate of loading. The assay system would provide the required accuracy for the fissile material content. Two detector systems in the MHC would replace the five or six detectors presently planned. The equipment savings could be directed toward the SHC, and provide monitoring during fill in a way that provides reliable soil characterization at 10 nCi/gram.]

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

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Printed:
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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3978
Document:	Binder XVIII-A CIS	Category: Technical	
Location:	SPC-271 Digface Fissile Monitor		
Comment:	Page 11, Section 5.1		

62. A stated design restriction is that the DFM shall use electrically cooled germanium detectors in its design. There are a number of advantages to using liquid nitrogen and a number of concerns with electric cooling. A number of the issues were brought out in the trade study. Operating cooling fans, compressors, etc. will introduce a number of complications at the digface that can impact the operation and contamination control. The concern with introducing contamination to the liquid nitrogen system is much overstated. A larger concern exists with the air flow caused by the fans and the buildup of contamination on the HEPA filter near the detectors. Other concerns also exist, and this requirement should be evaluated in more depth. [See also # 3976.]

Response by Comment Processing CPT. We recommend performing a study to evaluate changing DFM cooling to liquid nitrogen, followed by modifying the design if appropriate. [This is a consolidated response to comments 3976 (Binder XVIII-A) and 3978 (Binder XVIII-A).]

EPA	Reviewer: Jim McHugh	Significant? No	Comment # 3979
Document:	Binder XVIII-A CIS	Category: Technical	
Location:	SPC-271 Digface Fissile Monitor		
Comment:	Page 18, Section 5.2.6.2		

63. Energy calibration prior to every use is not the conventional practice. The calibration is verified with an energy check source; if the calibration is within the required tolerance, the system is not re-calibrated. Also, during this check process, the detector efficiency should be verified. During routine use there are a number of self checks (i.e. shifts or broadening of known gamma lines) to ensure the energy calibration is maintained.

Response by Jim Rose. We recommend correcting SPC-271, Section 5.2.6.2 to change "Detector calibration will be required ..." to "Verification of detector calibration will be required ...".

OU 7-10 Staged Interim Action Project, Stage II, Title II Response Report - sorted by Org/Reviewer

Printed:

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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3980
Document:	Binder XVIII-A CIS	Category: Technical	
Location:	SPC-271 Digface Fissile Monitor		
Comment:	Page 19, Section 5.2.7.3		

64. Since the gamma ray spectroscopy system will provide data on gamma emitters from 50 keV and above, one should ensure that the vendor provides an in situ gamma spectroscopy software package (with calibration factors established for various heights above the surface). It should provide for the standard gamma spectroscopy identification and quantitation of nuclides uniformly distributed in a soil volume. Since one cannot predict all the useful information alternatives, this capability is extremely valuable for assessing/measuring soil radionuclide concentrations. It could possibly decrease soil sampling/analysis requirements.

Response by Comment Processing CPT. The current DFM addresses criticality monitoring requirements. If CR-170 adds digface characterization requirements, solutions such as the reviewer's will be considered for implementing the new requirements. We agree that Am-241 is a significant concern for contamination control; the existing design was developed to mitigate this concern. If CR-170 is implemented, Am-241 data would be available to assist day-to-day retrieval planning. [This is a consolidated response to comments 3930 (Binder II), 3947 (Binder VI), and 3980 (Binder XVIII-A).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3981
Document:	Binder XVIII-A CIS	Category: Technical	
Location:	SPC-272 MHC and SHC Monitor Systems		
Comment:	Page 1, Section 1.1		

65. U 235 may not be a significant safety issue for Pit 9, but it is a significant fissile nuclide that all fissile-monitoring systems should measure. A requirement should also exist to measure the U 235 content of waste drums.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

**OU 7-10 Staged Interim Action Project, Stage II, Title II
Response Report - sorted by Org/Reviewer**Printed:
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EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3982
Document:	Binder XVIII-A CIS	Category: Technical	
Location:	SPC-272 MHC and SHC Monitor Systems		
Comment:	Page 13, Section 5.2.1		

66. Drum fill monitoring at the MHC uses 2 HPGe detectors (total of 4 at two stations) to monitor the drum that is being filled. The fixed location of the detectors and a stationary drum result in large uncertainties relative to a segmented gamma scanner system. A single germanium detector monitoring the waste (within the MHC) in small volume increments, prior to placing it in the drum, would provide a better estimate of drum fissile material loading. One could create a more favorable geometry involving a smaller volume compared to a total drum volume. This increased accuracy would eliminate the need for a segmented gamma scanner (DMS, section 5.2.2) to provide the better estimate of loading. The assay system would provide the required accuracy for the fissile material content. Two detector systems in the MHC would replace the five or six detectors presently planned. The equipment savings could be directed toward the SHC, and provide monitoring during fill in a way that provides reliable soil characterization at 10 nCi/gram.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3984
Document:	Binder XXIV Cost and Schedule	Category: Project Objectives	
Location:	Stage II Title II 90% Cost Estimate		
Comment:	Page 76/Samples and Analysis		

68. The cost estimate for samples and analysis, and the total sampling cost (\$7, 500,000) is very high. It is very important to choose those strategies that meet objectives and minimize costs. A number of strategies chosen in the FSP are not consistent with minimizing costs. A breakdown of costs is necessary to further evaluate the estimate.

Response by Comment Processing CPT. As agreed to in the 10/3/00 Agency Face-to-Face Meeting, we recommend that reevaluation of the costs and revision of the Field Sampling Plan be contingent upon implementation of CR-170.

Response Report - sorted by Org/Reviewer

EPA	Reviewer: Jim McHugh	Significant? Yes	Comment # 3983
Document:	Binder XXVI Project Management Docs	Category: Technical	
Location:	PLN-417, Risk Management Plan		
Comment:	Page A, Appendix A		

67. Item No. 7 identifies that not meeting the 10 nCi/gram segregation criteria is a major risk to the project. This is an open item listed as of September 1998. This item is still open and the 90% design does not provide satisfactory alternatives to overcome this deficiency.

Response by Comment Processing CPT. As presented at the 10/2/00 Agency Face-to-Face Meeting, we recommend that the issues posed by these comments be resolved by conducting a trade study to determine the most appropriate approach (technically and cost/ schedule) for assay of soil and waste, with considerations for impact to, and interfaces with, the Soils Trade Study and criticality measurement equipment and processes. The outcome of the trade study would be the basis for development of a Change Request. [This is a consolidated response to comments 3918 (Binder I-A), 3919 (Binder I-A), 3920 (Binder I-A), 3922 (Binder I-A), 3927 (Binder II), 3928 (Binder II), 3929 (Binder II), 3937 (Binder V), 3939 (Binder V), 3948 (Binder VI), 3951 (Binder VII-D), 3955 (Binder XI-C), 3956 (Binder XI-C), 3957 (Binder XI-C), 3965 (Binder XIX), 3966 (Binder XIX), 3967 (Binder XIX), 3968 (Binder XIX), 3969 (Binder XIX), 3971 (Binder XIX), 3972 (Binder XIX), 3977 (Binder XVIII-A), 3981 (Binder XVIII-A), 3982 (Binder XVIII-A), 3983 (Binder XXVI), 4038 (Binder XIX), 4097 (IRC), 4098 (IRC), 4099 (IRC), and 4100 (IRC).]

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3096
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Unspecified	
Location:	General		
Comment:	General		

General 1. Effective July 1, 2000, this Agency was elevated to department status. Therefore, reference should no longer be made to the Idaho Department of Health and Welfare/Division of Environmental Quality (IDHW/IDEQ) or variations thereof. Please refer to this Agency as the Idaho Department of Environmental Quality (IDEQ) in all future submittals.

Response by Dave Wilkins. We recommend incorporating the proposed change; a word search would be made to replace Idaho Department of Health and Welfare/Division of Environmental Quality (IDHW/IDEQ) with Idaho Department of Environmental Quality (IDEQ).

OU 7-10 Staged Interim Action Project, Stage II, Title II **Response Report - sorted by Org/Reviewer**

Printed:
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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3097
Document:	Binder I-A Stage II RD/RA Work Plan		Category: Unspecified
Location:	General		
Comment:	General		

General 2. All open items need to be tracked and, before construction is initiated, DOE needs to document how these open items were closed out and the documentation provided to the Agencies. All vendor data and reports must be provided to the Agencies for review. Given that there are open items and additional information to be generated at a later date, IDEQ does not consider the Stage II 90% RD/RAWP complete at this time. The Agencies need to discuss how to proceed with submittal and review of these materials in the context of this primary deliverable.

Response by Dave Wilkins. 1. Open Items - We recommend continuing the tracking of open items through the existing Action Item Tracking System. 2. Vendor data - Per Tri-Party Agreement documented in EDF-ER-151, Document Hierarchy and Deliverables (Binder I-A), vendor data will be provided as received (which is after submittal of the RD/RAWP) as an update to the Primary deliverable. We recommend that the Agencies discuss the level of detail desired in the vendor data submittals since we expect "all" would be overwhelming. 3. We assert that the Stage II 90% RD/RAWP submittal is complete at this time. All parties expended considerable effort reaching agreement on the required contents of the RD/RAWP submittal and documenting the agreement in EDF-ER-151. The June submittal contains the agreed-upon content. Further, outlines, early drafts, and incremental submittals were provided for comment well before submittal of the RD/RAWP package to assure that all parties had consistent expectations. Adjustments were then made before formal submittal. 4. We agree that the details regarding post-RD/RAWP submittals and reviews need to be worked out. We recommend initiating these discussions, perhaps as conference call agenda items.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3098
Document:	Binder I-A Stage II RD/RA Work Plan		Category: Unspecified
Location:	General		
Comment:	General		

General 3. Notwithstanding radionuclide decay processes, the Pit 9 inventory seems to be in a constant state of flux. Please summarize the changes made to the inventory since the inception of this project (i.e., how and why the inventory has changed over time).

Response by Rod Thomas. We recommend incorporating the proposed change. Significant (high level) differences in the inventory should be adequately documented.

OU 7-10 Staged Interim Action Project, Stage II, Title II
Response Report - sorted by Org/ReviewerPrinted:
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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3099
Document:	Binder I-A Stage II RD/RA Work Plan		Category: Unspecified
Location:	General		
Comment:	General		

General 4. Although it had been agreed that portions of the design could not be completed until vendor data was submitted, it was IDEQ's expectation that the 90% design be completed to the extent possible. For example, there are a number of procedures that were not "fleshed out" yet these procedures appear independent of vendor data. Examples of such include the Spill Prevention, Control and Countermeasures (SPCC) Plan, Project Waste Acceptance Criteria, and procedure for Inspection and Monitoring of Drums in the WMF-669 Temporary Storage Area. The Stage II 90% RD/RAWP must provide all design and operating requirements in order to reach a pre-final inspection or operational readiness review (ORR).

Response by Comment Processing CPT. As discussed at the 10/3/00 Agency Face-to-Face Meeting, no change to the RD/RAWP package is required in response to this comment. As agreed to, and documented in EDF-ER-151, the requirement for the Phase I O&M Plan is to "identify/outline procedures/plans". Detailed procedures are not required as part of the RD/RAWP package. [This is a consolidated response to comments 3099 (Binder I-A) and 3143 (Binder VII-A).]

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3106
Document:	Binder I-A Stage II RD/RA Work Plan		Category: Unspecified
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 102 of 121, Section 13, Paragraph 2		

7. Please elaborate on "with the exception of some characteristic hazardous waste". It would seem that hazardous waste determinations should be performed on all Stage II waste streams to allow for appropriate management and disposition.

Response by Brent Burton. We recommend taking under consideration the collection of data sufficient to support a complete hazardous waste determination during Stage II. The scope and impact of the changes would be defined and evaluated via Change Requests. Current characterization is aimed at satisfying Stage II objectives, including characterization for safe storage. This approach is consistent with an interpretation that a complete HWD is not needed for storage but would be needed if wastes or soils were sent off site or for disposal. Regarding proper management, note that all Pit 9 derived wastes will be managed in compliance with Subpart I of 40 CFR 264 while in CERCLA storage whether characterized as hazardous waste or not (as best management practice per Agency request - see page 19 of EDF-ER-071, 3rd paragraph). [This is a consolidated response to comments 3106 (Binder I-A), 3107 (Binder I-A), 3116 (Binder II), 3118 (Binder II), 3901 (Binder V), and 3991 (Binder I-A).]

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IDEQ Reviewer: IDEQ Jean Underwood Significant? Yes Comment # **3107**

Document: Binder I-A Stage II RD/RA Work Plan Category: Unspecified

Location: PLN-679 RD/RA Workplan

Comment: Page 103 of 121, Section 13.2, Paragraph 3

8. Although assignment of all applicable characteristic hazardous waste codes may not occur for Stage II activities, there is a need that this determination be made at some point to allow for appropriate final disposition.

Response by Brent Burton. We recommend taking under consideration the collection of data sufficient to support a complete hazardous waste determination during Stage II. The scope and impact of the changes would be defined and evaluated via Change Requests. Current characterization is aimed at satisfying Stage II objectives, including characterization for safe storage. This approach is consistent with an interpretation that a complete HWD is not needed for storage but would be needed if wastes or soils were sent off site or for disposal. Regarding proper management, note that all Pit 9 derived wastes will be managed in compliance with Subpart I of 40 CFR 264 while in CERCLA storage whether characterized as hazardous waste or not (as best management practice per Agency request - see page 19 of EDF-ER-071, 3rd paragraph). [This is a consolidated response to comments 3106 (Binder I-A), 3107 (Binder I-A), 3116 (Binder II), 3118 (Binder II), 3901 (Binder V), and 3991 (Binder I-A).]

IDEQ Reviewer: IDEQ Jean Underwood Significant? No Comment # **3108**

Document: Binder I-A Stage II RD/RA Work Plan Category: Unspecified

Location: PLN-679 RD/RA Workplan

Comment: Page 111 of 121, Table 9

9. Total costs for the environmental enclosure facility (EEF) were indicated to have increased by \$2.4M. Please provide a detailed breakdown of costs to justify this cost increase. In addition, please indicate whether or not the Title II 90% Design cost for the material handling structure/equipment reflects the current plan for no fissile monitor in the Soil Handling Center (SHC).

Response by Karl Sorman. The commentor is referred to the cost estimate crosswalk sheet (Title I 30% Redesign to Title II 90% Design) provided with the estimate package for explanation of the cost differences. Detail sheets of the estimates will show greater detail of costs. The cost estimate reflects the current plan for no fissile monitors in the SHC.

IDEQ Reviewer: IDEQ Jean Underwood Significant? No Comment # **3109**

Document: Binder I-A Stage II RD/RA Work Plan Category: Unspecified

Location: PLN-679 RD/RA Workplan

Comment: Page 113 of 121, Section 14.2, Paragraph 1

10. The assumption that sampling be done on a bulk basis and drummed materials be stored in existing Type II storage facilities is not consistent with the current project baseline. For example, due to capacity limitations and availability constraints of the Type II storage modules, the project has designed and plans to build a separate CERCLA storage facility. Please clarify.

Response by Doug Morrell. We recommend that no action be taken based on the comment. The discussed text is taken from the cost comparison between the original concept (October 1997) and the baseline. These concepts addressed were part of the original 1997 concept and are not part of the current project baseline as stated.

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Response Report - sorted by Org/Reviewer**Printed:
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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3110
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Unspecified	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 115 of 121, Table 10		

11. Please retitle this table to avoid using the term "explanation of significant differences" since this term has a much different meaning under CERCLA.

Response by Dave Wilkins. We recommend changing the title of Table 10 to prevent confusion.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3100
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Unspecified	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 14 of 121, Section 1.6, Bullet 4		

1. Please clarify that the goal is to maintain cost within the estimate presented in the 1995 Explanation of Significant Differences (ESD) for the project as a whole, not just Stage II. The estimated cost for Stages I and II was presented in the 1998 ESD (\$86M).

Response by Dave Wilkins. We recommend rewording the bullet to clarify that the intent was to maintain the cost within the total project estimate presented in the 1995 ESD and the estimate for Stage I and Stage II in the 1998 ESD. At this point the cost will be significantly beyond the estimate.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3101
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Unspecified	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 16 of 121, Section 1.8		

2. Assuming that the Agencies are able to reach agreement on an integration strategy for OU 7-10 and OU 7-13/14 probing campaigns, please note that it is IDEQ's position that optimization of the Stage II location will occur based on Campaign 1 and, assuming Campaigns 1 and 2 are collapsed, Campaign 2 data. Siting of the Stage II location is not dependent upon the outcome of Campaigns 3 and 4.

Response by Dave Wilkins. The IDEQ position is noted. Campaigns 1 and 2 are cache specific and are intended to provide information to locate Stage II. Campaigns 3 and 4 are intended to allow determination of predicting waste location and may or may not influence the final Stage II location.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3102
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Unspecified	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 20 of 121, Section 2.2.3		

3. The Document Hierarchy and Deliverables (EDF-ER-151) is an excellent, well-thought out product. IDEQ recommends that when future projects are being scoped in the early stages, it would be beneficial for the Agencies to use a similar level of detail to arrive at realistic timeframes/milestones and to identify a more comprehensive up-front listing of primary and secondary deliverables.

Response by Comment Processing CPT. Comment noted and appreciated.

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Response Report - sorted by Org/Reviewer

 Printed:
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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3103
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Unspecified	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 23 of 121, Section 3.2, Paragraph 2		
<p>4. IDEQ does not recognize that the "more expansive WAG 7 Remedial Investigation/Feasibility Study (RI/FS) process should better address long-term consequences of such decisions" such as handling or treatment of non-radiological hazardous waste. Instead, the Agencies had agreed that such a determination was dependent upon the outcome of trade studies to be performed subsequent to Stage II once the types/quantities of waste requiring treatment was better understood (i.e., determination of how a particular waste fraction is managed is dependent upon the volume retrieved).</p> <p><i>Response by Dave Wilkins. We recommend rewording the text to address the comment. Rationale: Stage II completes retrieval of waste and soil from the 20 ft by 20 ft focus area and provides temporary safe storage for these retrieved materials. (Approved Change Request (CR) 169 addresses this.) At this point trade studies would be performed to determine treatment options as a function of the amount and classification of the retrieved waste (i.e., determination of how a particular waste fraction is managed is dependent on the waste volume).</i></p>			
IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3104
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Unspecified	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 53 of 121, Figure 8		
<p>5. According to activity block W3a, a trade study will be performed if waste items are unable to fit into a 55-gallon drum. Please describe when these particular trade studies will be performed and where these waste items will be "stored" pending the outcome of the trade study.</p> <p><i>Response by Phil Rice. We recommend not pursuing any action associated with this comment. The trade study(s) will be performed at the time that the item is discovered. Any waste item that doesn't fit in a 55-gal drum will remain at the digface pending the outcome of the trade study.</i></p>			
IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3105
Document:	Binder I-A Stage II RD/RA Work Plan	Category: Unspecified	
Location:	PLN-679 RD/RA Workplan		
Comment:	Page 85 of 121, Section 8.10, Paragraph 4		
<p>6. There should only be minimal costs for redesign should the Stage II location be slightly altered from the baseline. If something other than pen/ink changes is envisioned, then the Agencies should discuss redesign efforts before such efforts commence.</p> <p><i>Response by Dave Wilkins. We recommend not pursuing the action proposed. If a location change is made before beginning construction, a pen and ink change is not acceptable control of a subcontractor. On the other hand, if field conditions indicate a slight change in location is needed after we have begun construction in the field, then a pen and ink change (field change request) is possible.</i></p>			

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IDEQ Reviewer: IDEQ Jean Underwood Significant? No Comment # **3111**

Document: Binder I-A Stage II RD/RA Work Plan Category: Unspecified

Location: PLN-679 RD/RA Workplan, Appendix D, IAG-16 Interface Agreement Between RWMC and Stage II

Page 1 of 23

Comment:

12. Please indicate when this interface agreement will be updated given the expiration date of "07/27/00".

Response by Jeff Bryan. We recommend updating the RWMC/Stage II Interface Agreement (IAG-16).

IDEQ Reviewer: IDEQ Jean Underwood Significant? No Comment # **3112**

Document: Binder I-A Stage II RD/RA Work Plan Category: Unspecified

Location: PLN-679 RD/RA Workplan, Appendix E, IAG-52 Interface Agreement Between Stage I and Stage II

Page 20 of 21

Comment:

13. In Requirement No. 3.2.3.5, it can be inferred that the sonic drill rig will need to be stored elsewhere once impervious sealant is applied to the storage facility floor. Please indicate where the sonic drill rig will be stored at that point in time.

Response by Doug Morrell. It is recommended that requirement 3.2.3.5 state that following the sealing of the storage facility floor, Stage I will need to store the drill rig following RWMC accepted methods in a location approved for storage by RWMC operations management.

IDEQ Reviewer: IDEQ Jean Underwood Significant? Yes Comment # **3113**

Document: Binder I-A Stage II RD/RA Work Plan Category: Unspecified

Location: PLN-679 RD/RA Workplan, Appendix G, High Level Schedule through Stage II Activities

Appendix G

Comment:

14. The timeframes presented in the Stage II summary schedule do not support the milestones dates established in the October 1997 OU 7-10 Remedial Design/Remedial Action Scope of Work and Remedial Design Work Plan (RD/RA SOW) or the OU 7-10 Stage I Work Plan (June 1998). Please clarify.

Response by Comment Processing CPT. Per the 10/3/00 Agency Face-to-Face Meeting, DOE has submitted a request for extension (see EM-ER-188-00). This issue is under review by the three Agencies. [This is a consolidated response to comments 3113 (Binder I-A), 3165 (Binder XXIV), 3986 (Binder I-A), 3998 (Binder I-A), and 4040 (Binder XXIV).]

IDEQ Reviewer: IDEQ Jean Underwood Significant? No Comment # **3114**

Document: Binder I-A Stage II RD/RA Work Plan Category: Unspecified

Location: PLN-679 RD/RA Workplan, Appendix I, Decisions Database Printout

Page I-6 of I-15

Comment:

15. Please provide copies of both the May 11 and August 27, 1999 letters referenced in Decision No. D-0027.

Response by Mona Duniho. We recommend adding these letters to the RD/RAWP package.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3115
Document:	Binder I-B General Equipment		
Location:	Arrangements		
	Sheet A-1		
	Camera View Layout Plan		

Comment:

16. This drawing should be revised to identify the locations of volatile organic compound (VOC) detectors in both the EEF and RAE.

Response by Dave Stephens. It is recommended that the drawing be revised to identify locations of VOC detectors.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3117
Document:	Binder II Process Definition and Data Needs		
Location:	DOE/ID-10731 Field Sampling Plan		
	Page 3-16, Section 3.1.8, Item 5		

Comment:

18. Given that Stage II sampling costs increased substantially, please verify that the current cost estimate factors in fingerprinting as opposed to laboratory analysis of sludges.

Response by Mark Borland. We recommend further evaluation of incorporating the proposed change into the solution. Currently the Stage II cost estimate includes a lump sum amount for sampling and analysis. We recommend detailing the cost of sampling and analysis based on the projected numbers of samples and the identified types of analysis to be performed.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3118
Document:	Binder II Process Definition and Data Needs		
Location:	DOE/ID-10731 Field Sampling Plan		
	Page 3-16, Section 3.1.8, Item 9		

Comment:

19. See Specific Comment No. 8 above. [UCN 3107: 8. Although assignment of all applicable characteristic hazardous waste codes may not occur for Stage II activities, there is a need that this determination be made at some point to allow for appropriate final disposition.]

Response by Brent Burton. We recommend taking under consideration the collection of data sufficient to support a complete hazardous waste determination during Stage II. The scope and impact of the changes would be defined and evaluated via Change Requests. Current characterization is aimed at satisfying Stage II objectives, including characterization for safe storage. This approach is consistent with an interpretation that a complete HWD is not needed for storage but would be needed if wastes or soils were sent off site or for disposal. Regarding proper management, note that all Pit 9 derived wastes will be managed in compliance with Subpart I of 40 CFR 264 while in CERCLA storage whether characterized as hazardous waste or not (as best management practice per Agency request - see page 19 of EDF-ER-071, 3rd paragraph). [This is a consolidated response to comments 3106 (Binder I-A), 3107 (Binder I-A), 3116 (Binder II), 3118 (Binder II), 3901 (Binder V), and 3991 (Binder I-A).]

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Response Report - sorted by Org/Reviewer

Printed:
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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3120
Document:	Binder II Process Definition and Data Needs Category: Unspecified		
Location:	DOE/ID-10731 Field Sampling Plan		
Comment:	Page 4-16, Section 4.3.3.10		

21. Since the waste/stained soil trade studies will likely not be performed until Stage II operations have been completed, it is recommended that the proposed trade study work plan be submitted as a component of the Stage II Remedial Action (RA) Report. The results of the trade studies could then be subsequently submitted as an addendum to the Stage II RA Report (e.g., in an iterative manner similar to that being implemented for the Stage I report) along with the results of any Stage II treatability studies.

Response by Mark Borland. We recommend incorporating the proposed change into the solution. We recommend revising the document hierarchy (Appendix B of the RD/RA Workplan) to reflect providing the disposition trade study workplan as part of the RA report and following the RA report with an Addendum at the completion of the disposition trade study. (same as comment 3121)

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3119
Document:	Binder II Process Definition and Data Needs Category: Unspecified		
Location:	DOE/ID-10731 Field Sampling Plan		
Comment:	Page 4-3 and 4-4, Table 4-1		

20. Please define the triangle symbol “ ”.

Response by Beth McIlwain. We recommend incorporating a change to correct the symbol. The triangle printed was to have been a "less than or equal to" symbol, per the Word document Field Sampling Plan. (Printer settings may have misinterpreted the symbol.)

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3121
Document:	Binder II Process Definition and Data Needs Category: Unspecified		
Location:	DOE/ID-10731 Field Sampling Plan		
Comment:	Page 6-9, Section 6.5, Paragraph 3		

22. Waste treatment trade studies should be performed as part of Stage II since this information dictates the types of treatability studies that may/may not be performed as part of Stage II. Note that DOE-ID approved Change Request No. CR 169 which added the referenced trade studies to the scope of Stage II.

Response by Mark Borland. We recommend incorporating the proposed change into the solution. We recommend revising the document hierarchy (Appendix B of the RD/RA workplan to reflect providing the disposition trade study workplan as part of the RA report and following the RA report with an Addendum at the completion of the disposition trade study. (same as 3120)

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Response Report - sorted by Org/Reviewer

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IDEQ Reviewer: IDEQ Jean Underwood Significant? Yes Comment # **3116**

Document: Binder II Process Definition and Data Needs Category: Unspecified

Location: EDF-1260 Stage II, Data Quality Objectives

Comment: Page 12 of 14, Section 3.2.2

17. See Specific Comment No. 8 above. [UCN 3107: 8. Although assignment of all applicable characteristic hazardous waste codes may not occur for Stage II activities, there is a need that this determination be made at some point to allow for appropriate final disposition.]

Response by Brent Burton. We recommend taking under consideration the collection of data sufficient to support a complete hazardous waste determination during Stage II. The scope and impact of the changes would be defined and evaluated via Change Requests. Current characterization is aimed at satisfying Stage II objectives, including characterization for safe storage. This approach is consistent with an interpretation that a complete HWD is not needed for storage but would be needed if wastes or soils were sent off site or for disposal. Regarding proper management, note that all Pit 9 derived wastes will be managed in compliance with Subpart I of 40 CFR 264 while in CERCLA storage whether characterized as hazardous waste or not (as best management practice per Agency request - see page 19 of EDF-ER-071, 3rd paragraph). [This is a consolidated response to comments 3106 (Binder I-A), 3107 (Binder I-A), 3116 (Binder II), 3118 (Binder II), 3901 (Binder V), and 3991 (Binder I-A).]

IDEQ Reviewer: IDEQ Jean Underwood Significant? Yes Comment # **3124**

Document: Binder V Env/Saf/Q Docs Category: Unspecified

Location: DOE/ID-10789 Waste Management Plan

Comment: Page 3-8, Section 2

25. In cases of discrete containers of liquids, it appears that these will not be stabilized before going to storage. This is contrary to the requirement that there be no free liquids sent to the CERCLA storage facility.

Response by Brent Burton. We recommend adding clarifying language in the Waste Management Plan, Chemical Compatibility Assessment Report, and EDF-ER-137 (Liquid Waste EDF), specifying temporary storage of unknown liquids in the RAE rather than the storage building (i.e., pending characterization results and evaluation). This approach is subject to space limitations. In the event space is not available, temporary storage in the EEF is the next preferred location. A special case handling procedure would be developed to guide these activities.

IDEQ Reviewer: IDEQ Jean Underwood Significant? No Comment # **3125**

Document: Binder V Env/Saf/Q Docs Category: Unspecified

Location: DOE/ID-10789 Waste Management Plan

Comment: Page 4-10, Section 4.2.2.1, Paragraph 3

26. Please indicate whether or not decontamination wastes will be placed in the same 55-gallon drum of waste materials processed in the Material Handling Center (MHC) just prior to decon. If not, then the procedures for containerizing decontamination wastes must be described.

Response by Brent Burton. We recommend revising the Waste Management Plan to clarify that the plan is to separately drum secondary decontamination wastes in the MHC.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3126
Document:	Binder V Env/Saf/Q Docs	Category: Unspecified	
Location:	DOE/ID-10790 Pollution Prevention/Waste Minimization Plan		
Comment:	Page 3-29, Section 3.7		

27. This section describes potential waste minimization opportunities that could be implemented but have not been integrated into any particular process. The potential opportunities described concern collection of characterization data up front in the process to conduct complete hazardous waste determinations, collecting data required by WIPP and the INEEL AMWTF, and characterization of secondary wastes associated with Pit 9 derived wastes. It is strongly recommended that DOE integrate these opportunities into the applicable process so that decisions are made on analytical data. The added benefit is that this should minimize reopening and extra handling of drums once in storage which should save considerable costs and reduce unnecessary exposure to site workers.

Response by Comment Processing CPT. As agreed to in the 10/3/00 Agency Face-to-Face meeting, we propose to do all data collection as required by the DQOs. Further, EDF-ER-151, Document Hierarchy and Deliverables, should be modified to show that the Stage II RA Report must include an evaluation of the disposition of all retrieved soils and waste from the Stage II excavation area, including the collection of data and an evaluation of long-term management strategies for the waste and soil.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3127
Document:	Binder V Env/Saf/Q Docs	Category: Unspecified	
Location:	INEEL/EXT-2000-000690 Preliminary Criticality Safety Evaluation		
Comment:	Page 13, Section 6.4		

28. It is unclear why the criticality safety of the SHC was evaluated at the 30% design level given that the design has matured to the 90% level. Please evaluate the criticality safety of the SHC based on the 90% design.

Response by Todd Taylor. We recommend no change to the document. The 30% design package was used for consistency. We recognize that even though the design has progressed, the control on the SHC is fissile mass, which will not be affected by the design. The preliminary CSE is adequate since it defines the appropriate physical and administrative controls.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3128
Document:	Binder V Env/Saf/Q Docs	Category: Unspecified	
Location:	INEEL/EXT-2000-000690 Preliminary Criticality Safety Evaluation		
Comment:	Page 17, Section 6.5		

29. It is unclear why the criticality safety of the MHC was evaluated at the 30% design level given that the design has matured to the 90% level. Please evaluate the criticality safety of the MHC based on the 90% design.

Response by Todd Taylor. We recommend no change to the document. The 30% design package was used for consistency. We recognize that even though the design has progressed, the control on the MHC is fissile mass, which will not be affected by the design. The preliminary CSE is adequate since it defines the appropriate physical and administrative controls.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3129
Document:	Binder V Env/Saf/Q Docs	Category: Unspecified	
Location:	INEEL/EXT-2000-000690 Preliminary Criticality Safety Evaluation		
Comment:	Page 19, Section 7.2.1, Paragraph 2		

30. An engineering device to control the build-up of fissile material within the SHC system may be required pending further evaluation. This should be determined and included as part of the 90% design.

Response by Comment Processing CPT. Per Tri-Party agreement at the 10/3/00 Agency Face-to-Face meeting, we recommend revising Phase I O&M Plan Procedure EOP-006 Sections 4.5 and 4.6 to include limiting clogging and build ups in the SHS for criticality control, and to address the potential role of the digface monitor in criticality control. [This is a consolidated response to comments 3129 (Binder V) and 3906 (Binder V).]

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3130
Document:	Binder V Env/Saf/Q Docs	Category: Unspecified	
Location:	INEEL/EXT-2000-00707 Fire Hazards Analysis		
Comment:	Page 2 of 71, Section 1.2, Paragraph 2		

31. It is incomprehensible that the potential for a fire or explosion resulting from the placement of sheet pilings was not evaluated in the subject Fire Hazards Analysis (FHA). This evaluation must be performed in support of the Stage II 90% design given that the outcome could potentially have significant consequences in terms of impact to baseline assumptions and overall project direction.

Response by Comment Processing CPT. Per the 10/3/00 Agency Face-to-Face Meeting: An underground fire and/or explosion initiated by shoring pile installation is addressed in Appendix A to USQ Safety Evaluation No. SE-RWMC-99-039. (A copy was provided to the Agencies on 10/9/00.) We recommend adding this USQ to the RD/RAWP package. We also recommend providing additional detail on modeling to be performed, plans for cold testing, and measures planned during installation. Further, we recommend modifying the piling specification to indicate that the Project will provide direction (e.g. driving rates) for piling installation. We do not anticipate the need for design changes, but realize that procedures might have to be updated. [This is a consolidated response to comments 3130 (Binder V), 3163 (Binder XXIV), 3166 (Binder XXIV), 3211 (Binder I-A), and 3990 (Binder I-A).]

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3131
Document:	Binder V Env/Saf/Q Docs	Category: Unspecified	
Location:	INEEL/EXT-99-00013 Preliminary Safety Assessment		
Comment:	Page 5-4, Section 5.5.3		

32. This section appears to indicate that an independent criticality safety evaluation will be performed each time there is an indication of "no go" and operations are put in STANDBY mode. It is recommended that a single document be prepared to bound the potential scenarios and to identify the appropriate course of action. Otherwise, significant time may unnecessarily be expended in performing individual evaluations.

Response by Rod Peatross. We recommend a minor revision to the PSA that makes it clear that these cases will be evaluated by criticality safety, but that a criticality safety evaluation report might not be required.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3132
Document:	Binder V Env/Saf/Q Docs	Category: Unspecified	
Location:	INEEL/EXT-99-00013 Preliminary Safety Assessment		
Comment:	Page 5-4, Sections 5.5.3.2 and 5.5.3.3		

33. Please clarify how the digface monitor (DFM) and the material load-out area (MLA) fissile monitor are effective administrative controls during processing of materials in the MHC or SHC. Specifically, the DFM is used to plan retrievals so that the 380-g Pu-239 limit is not exceeded. In addition, the MLA fissile monitor is a post-MHC or -SHC operation and, as such, would appear to have little bearing on the materials handled in the MHC or SHC.

Response by Mark Borland. We recommend further evaluation of incorporating the proposed change into the solution. To clarify how the monitors function as a control, envision the following: The Material Handling Center (MHC) is a fissile mass control area. The Digface monitor (DFM) and the material load-out area monitor (MLA) function as control gates tracking the quantity of material contained within the MHC. The DFM is an input counter and the MLA and output counter. The difference between the input and output is the total fissile mass assumed to be contained in the MHC. This total must be maintained below 380gm per the Criticality Safety Evaluation. Before an ITM load can be transferred to the MHC the fissile content of the ITM must be added to the existing fissile mass contained in the MHC. If the combined quantity exceeds 380gms, then the MHC must package and remove some material before receiving the ITM. To prevent accumulation of errors due to differences in accuracy between the DFM and the MLA, the MHC content can be "zeroed" by emptying the MHC of waste and completing decontamination. We recommend revising Section 5.5.3.2 of the Preliminary Safety Assessment to clarify the accounting of fissile material in the MHC.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3122
Document:	Binder V Env/Saf/Q Docs	Category: Unspecified	
Location:	PLN-651, INEEL/EXT-2000-00405 QAPjP for TAPS Emissions Monitoring Stage II		
Comment:	General		

23. Please address the May 15, 2000 IDEQ comments on the subject document. These comments have yet to be addressed.

The following are responses to the subject comments (from Binder D1 Environmental Documents):

1. [QAPjP for TAPs Emissions Monitoring of OU 7-10, General (UCN 2797)] Because waste has been buried for a period of many years, has the possibility of biodegradation of the halogenated hydrocarbons been reviewed? For example, under anaerobic conditions, trichloroethylene (TCE) can degrade to vinyl chloride. Given that some degradation byproducts, such as dichloroethylene (DCE) and vinyl chloride are not removed very efficiently by carbon absorption, it would be prudent to periodically make emission measurements of such degradation byproducts. - - Response by Paul Ritter. We recommend no changes to documentation be made based on the comment since the plan already addresses the potential for emission of degradation products by allowing for detection and tentative identification and quantification of TICs. The degradation products are expected to be present at low concentrations relative to the solvents that were buried with the waste, and represent a small hazard relative to the known solvents, particularly carbon tetrachloride. The presence of degradation products will be indicated by unknown peaks in the process GC output. If significant unknown peaks are noticed by the GC/ECD, but cannot be identified/quantified, Method TO14a sampling and analysis will be performed. If the results of GC and Method TO14a measurements show that the risk posed by degradation products is a significant fraction of the overall risk associated with the emissions, the monitoring program will be modified for better coverage of the emissions of the degradation products (i.e., modify the GC operations to quantify the specific degradation product(s) of concern.

2. [QAPjP for TAPs Emissions Monitoring of OU 7-10, Page 13 of 59 section 1.1 (UCN 2798)] While it is perfectly acceptable to describe the three stages of the OU 7-10 project, it is not appropriate to establish a schedule in this document. Please delete all dates. - - Response by Paul Ritter. We recommend deleting dates as stated.

3. [QAPjP for TAPs Emissions Monitoring of OU 7-10, Page 14 of 59 section 1.2 (UCN 2799)] Revise the second sentence as follows: "For Non-Radionuclide emissions, the only ARAR that might require monitoring of the OU 7-10 stack is the TAPs (toxic air pollutants) Rule." - - Response by Paul Ritter. We recommend incorporating the changes.

4. [QAPjP for TAPs Emissions Monitoring of OU 7-10, Page 17 of 59 section 2.1.1 (UCN 2800)] The OU 7-10 staff will perform quarterly and annual calculations of the TAPs emissions released from the REE (sic) HVAC stack. If the stack sampling and monitoring is not an approved method for that specific purpose, then those emissions should be designated as estimated emissions. - - Response by Paul Ritter. We recommend accepting this comment as it applies to our proposal for mercury sampling, assuming that use of the term "estimated emissions" won't compromise our use of the data -- otherwise, we should discuss further with the Agencies. I don't think that there are any reference methods for continuous sampling for mercury. Method 5 is for short term sampling under steady-state operation of e.g., a coal-fired power plant, and would not be appropriate for monitoring a retrieval operation. The proposed method is expected to be sufficiently sensitive to measure mercury emissions at a small fraction of the AAC. The GC CEMS will be operated to EPA Performance Specification 9, and data from the GC should be acceptable as measurement of "emissions", not qualified as "estimated emissions." Method TO-14a is not approved for stack

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sampling -- just for ambient air. My understanding (based on conversations with Rema Howell at EPA/Research Triangle) is that Method TO-14a wasn't approved for stack sampling because some canisters are too reactive, and the manufacturer of a potentially acceptable canisters (Restek Inc.) hasn't provided information to support the claim that their canisters are sufficiently passive. We accept this comment with respect to emissions measured using TO-14A, particularly because we don't plan to do continuous sampling into canisters. A CEMS will generally give more reliable emissions data than results of periodic sampling and analysis.

5. [QAPjP for TAPs Emissions Monitoring of OU 7-10, Page 22 of 59 section 3.3 (UCN 2801)] This section states that flow measurement will conform to ANSI 99. Is this the 1999 revision to ANSI 13.1-1969? If not, what is the official ANSI document number and title? - - Response by Paul Ritter. Yes, ANSI 99 refers to ANSI/HPS N13.1-1999, "Sampling and Monitoring Releases of Airborne Radioactive Substances from the Stacks and Ducts of Nuclear Facilities."

6. [QAPjP for TAPs Emissions Monitoring of OU 7-10, Page 22 of 59 section 3.3 (UCN 2802)] This section states that 1,1,1-trichloroethane (TCA), a non-carcinogen, is in the Pit 9 inventory. However, the Record of Decision does not speciate the TCA between 1,1,1-TCA and 1,1,2-TCA, a carcinogen. Therefore, if other measurements are made in concert with CCl₄ measurements, these measurements should involve 1,1,1-TCA and 1,1,2-TCA. - - Response by Paul Ritter. My understanding (from discussions with Richard Roblee) is that there is no 1,1,2 TCA in the inventory based on Rocky Flats records, and because it really isn't used in industry. Unless there is something particularly difficult about detecting/measuring 1,1,2 TCA, if present, it should be characterized as part of the TIC analysis. If present in substantial amounts (as determined by comparison to the risk-weighted releases of carbon tetrachloride) then we should consider more intensive sampling/analysis for 1,1,2 TCA.

7. [QAPjP for TAPs Emissions Monitoring of OU 7-10, Page 22 of 59 section 3.3 (UCN 2803)] This section states that TCA and trichloroethylene (TCE) pose most of the non-carcinogen risk. Note that TCE and 1,1,2-TCA are considered by EPA to be carcinogens. - - Response by Paul Ritter. As of 10/17/00, the IDAPA regulations list TCE (trichloroethylene) as a carcinogen. The EPA IRIS database states "The carcinogen assessment summary for this substance has been withdrawn following further review. A new carcinogen summary is in preparation by the CRAVE Work Group." The EPA's Supervened Technical Support Center does provide slope factors for TCE, although the web page prints with a "DO NOT QUOTE OR CITE" header. The risk assessment for VOC emissions from the OU7-10 RAE stack also treated TCE as a carcinogen, and found that TCE would not be an important contributor to carcinogenic risk. As noted in the response for item 7, 1,1,2 TCA is not believed to be in the inventory.

8. [QAPjP for TAPs Emissions Monitoring of OU 7-10, Page 26 of 59 section 4.1.2 (UCN 2804)] This section states that either GC/ECD or EPA Method TO-14A may be used to measure the VOC concentration in the stack. Method TO-14A is approved by EPA for the monitoring of ambient air, and not for stack measurement. In order to meet EPA approval for stack measurement, the conditions delineated in 10 CFR 60 must be met. - - Response by Paul Ritter. The GC/ECD CEMS will be operated in accordance with Performance Specification 9 from 40CFR60 App. B. The GC/ECD CEMS will probably be the primary basis for our emissions estimates of the VOCs that are known to be in the inventory, and that drive the risk estimates. I agree concerning method TO-14a -- although Method TO14a might be technically defensible, it is not approved for stack sampling -- just for ambient air. My understanding (based on conversations with Rema Howell at EPA/Research Triangle) is that Method TO14a wasn't approved for stack sampling because some canisters (unlike the Restek Silcosteel canisters that we specified) are too reactive to be considered acceptable for source testing/measurement.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3123
Document:	Binder V Env/Saf/Q Docs	Category: Unspecified	
Location:	PLN-652, INEEL/EXT-2000-00407 QAPjP - NESHAPs Monitoring of Pit 9 of Stage II		
Comment:	General		

24. Please address the May 15, 2000 IDEQ comments on the subject document. These comments have yet to be addressed.

The following are responses to the subject comments (from Binder D1 Environmental Documents):

9. [QAPjP for NESHAPs Monitoring of OU 7-10, General (UCN 2805)] PSD Requirements: This document cites the requirements from 10 CFR 61, Subpart H (Radionuclide NESHAPs) monitoring, however there is no mention of IDAPA 16.01.01.003.93.b. In accordance with this regulation, the radionuclide emissions are significant, and prevention of significant deterioration (PSD) rules are applicable. Is this information discussed in another document? - - Response by Paul Ritter and Brent Burton. We recommend making no change to the document. The citations appear to be in error. The information is not discussed in another document because the ROD ARARs do not include IDAPA PSD rules for radionuclides. It is agreed that the radionuclide emissions would be significant as defined by IDAPA; however, it is not clear what additional substantive actions this implies considering that the project is employing HEPA filtration (i.e., BACT) to control radionuclide emissions.

10. [QAPjP for NESHAPs Monitoring of OU 7-10, General (UCN 2806)] ANSI Standards: This document cites compliance with ANSIN 13.1-1999, however, this standard has not been officially adopted by 10 CFR 61, Subpart H. Also, the current standard, ANSIN 13.1-1969, was the applicable regulation at the time of ROD signature. - - Response by Paul Ritter. Continuous record sampling must be performed for the OU7-10 retrieval in accordance with 40 CFR 61, Appendix B, Method 114. Method 114 incorporates by reference ANSI N13.1-1969, "American National Standard Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities," which was updated and superseded by a revision released in May 1999 (referred to here as ANSI 99). The 1969 version of ANSI N13.1 (referred to here as ANSI 69) is no longer endorsed by the ANSI, and the EPA has proposed in new rulemaking (USEPA, Notice of Proposed Rulemaking, NESHAP Subpart H, Federal Register, May 9, 2000, Volume 65, Number 90, pages 29933-29937) that stack monitoring systems constructed before October 1, 2000, which comply with ANSI 69, are acceptable, and that stack monitoring systems constructed after October 1, 2000 must comply with ANSI 99. We recommend further evaluation and discussions among the parties on this topic.

11. [QAPjP for NESHAPs Monitoring of OU 7-10, General (UCN 2807)] Emission Points: This document describes the emissions from the REE (sic) HVAC stack. The NESHAPs requires documentation of all emissions, including fugitive emissions. Are there any other possible radionuclide emission points that should be documented? - - Response by Paul Ritter and Brent Burton. The EDF Operable Unit 7-10 (Pit 9) Interim Action Project, Stage II Air Emissions Evaluation, ER-WAG7-109, Rev 0, is the project report that documents all of the emissions sources for the Stage II project including emissions from the CERCLA storage facility. The evaluation did not identify any fugitive emissions sources for radionuclides. The QAPjP document is limited to addressing emissions from the RAE stack because this emissions point was the only point identified in the Stage II air emissions evaluation EDF as requiring monitoring.

12. [QAPjP for NESHAPs Monitoring of OU 7-10, Page 6 of 38 section 1.1 (UCN 2808)] Please delete reference to dates. Project schedules are not to be established in this document. - - Response by Paul Ritter. We recommend deleting the dates as stated.

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13. [QAPjP for NESHAPs Monitoring of OU 7-10, Page 22 of 38 section 4.2.1 (UCN 2809)] In accordance with 40 CFR 61.93, Subpart H, stack gas velocity and volumetric flow rate is to be determined using 40 CFR 60, Appendix A Methods 2 of 2A, depending on the pipe and flow conditions. If the flow conditions are unacceptable, an alternative method to Method 2/2A must be provided for approval. -- Response by Paul Ritter. Continuous record sampling must be performed for the OU7-10 retrieval in accordance with 40 CFR 61, Appendix B, Method 114. Method 114 incorporates by reference ANSI N13.1-1969, "American National Standard Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities," which was updated and superceded by a revision released in May 1999 (referred to here as ANSI 99). The 1969 version of ANSI N13.1 (referred to here as ANSI 69) is no longer endorsed by the ANSI, and the EPA has proposed in new rulemaking (USEPA, Notice of Proposed Rulemaking, NESHAP Subpart H, Federal Register, May 9, 2000, Volume 65, Number 90, pages 29933-29937) that stack monitoring systems constructed after October 1, 2000 must comply with ANSI 99, and that the velocity and flow measurements should also be conducted in accordance with ANSI 99. The ANSI 99 method is a variant of EPA Method 2. We recommend further evaluation and discussions among the parties on this topic.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3138
Document:	Binder VI Misc Docs	Category: Unspecified	
Location:	EDF-ER-160, OU 7-10, Stage II, D&D/Closure Planning and Requirements Investigation		
Comment:	Appendix B, General		

39. As there is no extra space within the proposed OU 7-10 CERCLA storage facility, please describe where all bagged-out equipment, etc. will be stored during cold standby.

Response by Jeff Bryan. We recommend no changes to Stage II documents at this time. This topic should be addressed through Change Req. est (CR) process. After approval of an appropriate CR, we recommend a trade study to evaluate alternatives for storing bagged out equipment. Rationale: EDF-ER-160, when issued (i.e., Rev. 0), should drive the initiation of several CRs that would affect the Stage II baseline by adding/modifying requirements as indicated in Appendix D of EDF-ER-160. Implementation of these CRs would include flowdown of applicable requirements to the DRDs and the ORD. Note that proposed requirement #8 (in App. D) creates the basis for Stage II designs to accommodate maintaining Stage II facilities, equipment, and processes in a cold standby state. Providing storage space for bagged-out equipment should be a flowdown requirement from #8. Many alternatives exist for meeting such a flowdown requirement (e.g., heated cargo container(s), expanded Stage II storage building) and should be analyzed via trade study to ensure a cost-effective solution.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3141
Document:	Binder VI Misc Docs	Category: Unspecified	
Location:	EDF-ER-160, OU 7-10, Stage II, D&D/Closure Planning and Requirements Investigation		
Comment:	Appendix B, Page 11 of 11, Item 16F		

42. Please provide justification for not maintaining radiation and hazardous gas monitoring at the stack during cold standby. Furthermore, indicate when an evaluation of air emissions during cold standby will be prepared. It may be beneficial to prepare such an evaluation once Stage II operational data is available.

Response by Jeff Bryan. For clarification, we recommend adding the following justification to the Appendix B assumptions in EDF-ER-160 as to why radiation and hazardous gas monitoring is not maintained at the stack during cold standby:

- 1) the source term is assumed to have been removed from the Stage II area
- 2) the absence of operations to "stir up" contaminants
- 3) the cover installed over the excavation area is assumed to prevent migration of contaminants from the pit
- 4) RAE interior is assumed to have had loose contamination removed, contained, or affixed
- 5) HEPA/Carbon filters in main exhaust still in place/functioning (no DP though)
- 6) Exhaust fans are assumed to be deactivated so there would be no airflow stream to speak of from which the monitors could measure concentrations of contaminants.

We also recommend performing an air emissions evaluation for the cold standby period to validate/invalidate these assumptions for future planning. It is agreed that this evaluation would best be performed when Stage II operational data is available (e.g., when it is known what source term remains in the excavation area). Note that stack air samples may be taken manually as needed.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3139
Document:	Binder VI Misc Docs	Category: Unspecified	
Location:	EDF-ER-160, OU 7-10, Stage II, D&D/Closure Planning and Requirements Investigation		
Comment:	Appendix B, Page 2 of 11, Item 6		

40. If a release occurs within the secondary confinement structure, please clarify whether or not decontamination of the secondary confinement structure will be performed to mitigate the further spread of contamination.

Response by Jeff Bryan. We recommend the development of an OU 7-10 Stage II facility-specific radiological/ hazardous contaminant release response plan(s) for inclusion in the RWMC Addendum to the INEEL Emergency Response/RCRA Contingency Plan prior to operations. This plan (or plans) should focus on control and mitigation actions/methods and the resumption of Stage II operations (or Stage II close-out activities) in the event that a release has occurred within the secondary confinement. Rationale: While releases that occur during cold standby are out of scope for Stage II (i.e., currently planned as a part of Stage III), releases could occur during Stage II operations or closeout activities. An emergency preparedness/response plan should be in place to mitigate the further spread of contamination.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3140
Document:	Binder VI Misc Docs	Category: Unspecified	
Location:	EDF-ER-160, OU 7-10, Stage II, D&D/Closure Planning and Requirements Investigation		
Comment:	Appendix B, Page 5 of 11, Item 7		

41. Consideration should be given to the covers having integral carbon filters as well as integral HEPA filters.

Response by Jeff Bryan. For clarification, such consideration is reflected in proposed new requirements #20 - 22 and #37 - 39 contained in Appendix D of this EDF. We recommend that the text in the Notes/ Assumptions column of Appendix B be modified to reflect the need to contain hazardous and radiological contaminants rather than specifying exact solutions of the design. Rationale: Provide clarification on intended plans for final design.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3136
Document:	Binder VI Misc Docs	Category: Unspecified	
Location:	EDF-ER-160, OU 7-10, Stage II, D&D/Closure Planning and Requirements Investigation		
Comment:	Page 10 of 20, Section 1.2, Last Paragraph		

37. Final closure of the Stage II excavation/retrieval area is not to await final closure of the entire Subsurface Disposal Area (SDA). Instead, closure should be addressed in accordance with the OU 7-10 ROD.

Response by Jeff Bryan. Recommend deleting the text ", or the entire Subsurface Disposal Area (SDA)" in the second sentence of the last paragraph of Section 1.2 as well as other occurrences of the phrase throughout EDF-Ek-160. Rationale: Delete phrase to avoid confusion. For clarification, inclusion of the phrase was intended only to leave an option open for addressing a covered void (one possible future state) at a later time when residual risks present in Pit 9 are evaluated as a part of OU 7-13/14. This end state is conceivable if full-scale remediation proves infeasible or that Stage III entails "hot-spot" retrieval(s).

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3137
Document:	Binder VI Misc Docs	Category: Unspecified	
Location:	EDF-ER-160, OU 7-10, Stage II, D&D/Closure Planning and Requirements Investigation		
Comment:	Page 16 of 20, Section 3.1, Paragraph 2, Bullet 2		

38. DOE has made an assumption that double confinement of the excavation area is eliminated for its post-operations life cycle phases. Please explain how this assumption is consistent with DOE order requirements. While the RAE may not have a separate secondary confinement structure that moves with it during relocation, IDEQ recommends that an evaluation be performed to determine if secondary confinement may be achieved in some other equivalent manner.

Response by Jeff Bryan. We recommend performing an analysis to determine if double confinement is needed for the post operations retrieval area and during move of the RAE.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3135
Document:	Binder VI Misc Docs	Category: Unspecified	
Location:	EDF-ER-160, OU 7-10, Stage II, D&D/Closure Planning and Requirements Investigation		
Comment:	Page 9 of 20, Section 1.1, Paragraph 2		

36. IDEQ agrees that relocation of the Stage II facilities and equipment is not expected as part of Stage II; however, the possibility cannot be definitively eliminated at this point in time.

Response by Jeff Bryan. We recommend that no changes be made to Stage II documents other than those proposed in EDF-ER-160. Proposed TFR requirement #6 (see App. D of EDF-ER-160), and its rationale, describe the planned end-state of Stage II, to occur when Stage II facilities are placed into cold standby. Any relocation of these facilities is anticipated to be a part of the Stage III effort (TBD). It is recognized that this planned end-point for Stage II (not yet baselined) could be changed to include one or more relocations as needed via the approval of a Change Request (CR) defining the additional scope and a new Stage II endpoint.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3133
Document:	Binder VI Misc Docs	Category: Unspecified	
Location:	EDF-ER-160, OU 7-10, Stage II, D&D/Closure Planning and Requirements Investigation		
Comment:	Summary, Recommendation 1		

34. DOE recommends that a trade study be performed to select the preferred means for performing the RAE relocation. IDEQ expected that this trade study be submitted as a component of the Stage II 90% RD/RAWP. It is imperative that such a trade study be performed so that there is an opportunity to affect the RAE design in a timely manner.

Response by Comment Processing CPT. As agreed to in the 10/2/00 Agency Face-to-Face Meeting, we recommend modifying the appropriate construction specifications to require the construction subcontractor to provide a detailed relocation plan describing how the facility will be relocated. The plan would be reviewed by the Agencies during the constructability review.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3134
Document:	Binder VI Misc Docs	Category: Unspecified	
Location:	EDF-ER-160, OU 7-10, Stage II, D&D/Closure Planning and Requirements Investigation		
Comment:	Summary, Recommendation 5		

35. IDEQ agrees that further discussion is needed regarding the end-state of Pit 9 following Stage III. However, note that any decisions regarding end-state must be consistent with criteria established in the OU 7-10 Record of Decision (ROD).

Response by Jeff Bryan. We recommend modifying the second to the last sentence of recommendation #5 to read: "These alternatives and conditions could affect Stage II plans and designs (see Note 3) and must be consistent with criteria established in the OU 7-10 Record of Decision (ROD)." Rationale: Provides further clarification and bounds for the end-state of Stage II.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3142
Document:	Binder VI Misc Docs	Category: Unspecified	
Location:	PLN-632, OU 7-10 SIA Project Physical Security Plan, INEEL Company Manual 11		
Comment:	Page 7 of 9, Section 6.5.6		

43. The Physical Security Plan indicates that operations will essentially cease when a camera or video recorder becomes inoperable. In order that operational down time is kept to a minimum, IDEQ recommends that back-up or replacement equipment is readily available.

Response by Patricia Jurbala. We recommend adding a requirement in the Operations and Maintenance Plan to maintain camera spares for use if the camera or video recorder becomes inoperable. The Security Plan should remain "as is" because it adequately protects the security interests by ceasing loading operations until a camera is operational.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3143
Document:	Binder VII-A O&M Plan & App A-F	Category: Unspecified	
Location:	O&M Plan-678, Appendix E, Normal Ops Plan/Procedures		
Comment:	General		

44. There is a lack of overall detail in the procedures included in Appendix E. IDEQ provides the following three examples to support our observation. First, PAP-009 (Page 5 of 9, Section 4.3.7) indicates that uncontainerized liquids will be absorbed at the digface but does describe how this is to be accomplished. Second, PAP-009 (Page 8 of 9, Section 5) does not detail operational physical and chemical data needs and observations to be noted during retrieval. Third, PAP-011 (Page 4 of 5, Section 4.7) does not describe how to process and label wet/dry secondary waste generated as a result of decontamination activities. IDEQ requests that the procedures be sufficiently detailed and include appropriate performance standards as part of the Stage II 90% RD/RAWP.

Response by Comment Processing CPT. As discussed at the 10/3/00 Agency Face-to-Face Meeting, no change to the RD/RAWP package is required in response to this comment. As agreed to, and documented in EDF-ER-151, the requirement for the Phase I O&M Plan is to "identify/outline procedures/plans". Detailed procedures are not required as part of the RD/RAWP package. [This is a consolidated response to comments 3099 (Binder I-A) and 3143 (Binder VII-A).]

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3144
Document:	Binder VII-A O&M Plan & App A-F	Category: Unspecified	
Location:	O&M Plan-678, Appendix E, Normal Ops Plan/Procedures, EOP-006 Operating the SVS		
Comment:	Page 8 of 18, Paragraph 3		

45. Please describe how confinement will be maintained or contamination spread minimized when the side access door on the hopper is opened. This should be part of the procedures.

Response by Bob Carpenedo. We recommend adding verbiage to EOP-006 paragraph 4.6 that describes how confinement will be maintained and contamination spread minimized if the access panel on the SVS hopper is to be opened. The hopper and panel are already in a glovebox therefore confinement is maintained. To minimize contamination spread the hopper will be verified empty prior to removing the panel. All work will be through gloveports.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3145
Document:	Binder VII-C App H-O	Category: Unspecified	
Location:	O&M Plan-678, Appendix J, EDF-ER-137, INEEL/EXT-2000-00531, Liquid Management Plan		
Comment:	Page 15 of 26, Table 4		

46. Please indicate when the specific procedure for management of unknown liquids will be prepared. It is imperative that procedures be developed to address how unknown containerized liquids will be managed to comply with safe storage and chemical compatibility objectives.

Response by Bob Carpenedo. We recommend preparing an annotated outline for a special procedure for management of unknown liquids. The procedure itself would be completed for issue with the other special handling/operations procedures.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3146
Document:	Binder VII-C App H-O	Category: Unspecified	
Location:	O&M Plan-678, Appendix N, INEEL/EXT-2000-00857, Master Test and Evaluation Plan		
Comment:	Page 8-2, Section 8.3, Paragraph 2		

47. Test reports must be made available to the Agencies for review in support of the pre-final inspection to be performed before Stage II operational start up.

Response by Phil Rice. We recommend incorporating the proposed change into the solution. The test reports should be provided to the Agencies as requested.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3147
Document:	Binder VIII Prefinal Inspection Checklist	Category: Unspecified	
Location:	PFIC-000, Prefinal Inspection Checklist		
Comment:	Appendix A, General		

48. Instead of the pre-final inspection checklist categories of "satisfactory" and "open", IDEQ recommends the following categories: incomplete; complete; complies; and, does not comply. This allows for items to be completed differently from that initially envisioned in planning documents as long as the specified requirements are satisfied.

Response by Phil Rice. We recommend incorporating the proposed change into the solution. In addition, instructions should be included in the body of the PFIC as follows (paraphrased): INCOMPLETE - means that the item has not been finished and therefore remains open until completed. COMPLETE - means that the item has been finished. COMPLIES - means that the item complies with either the verbatim requirement or the spirit and intent of the requirement. This allows for items to be completed differently from that initially envisioned in planning documents as long as the specified requirements are satisfied. DOES NOT COMPLY - means that the item does not meet either the verbatim requirements or the spirit and intent of the requirements. NOTE: Two (2) marks would be required for each line element on the checklist: 1) COMPLETE/INCOMPLETE and 2) COMPLIES/DOES NOT COMPLY. Items that are complete may or may not be in compliance with specified requirements. The NOTES field would be retained in the PFIC so that notes on INCOMPLETE or DOES NOT COMPLY items could be entered and tracked.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3148
Document:	Binder VIII Prefinal Inspection Checklist		
Location:	PFIC-000, Prefinal Inspection Checklist		
Comment:	Appendix A, Page 3 of 8, Inspection Item 6		

49. A facility VOC monitor system should be added to the pre-final inspection checklist. In addition, if HEPA and carbon filters are not considered part of the "EEF HVAC System", then these items should be identified as a separate system on the pre-final inspection checklist.

Response by Phil Rice. We recommend incorporating the proposed change into the solution. The VOC monitoring system should be added to Section 6 "Systems and Components" and Section 9 "Inspections and Maintenance" of the PFIC. Note that PAP-018 "Monitoring Volatile Organic Compounds (VOC) and Mercury (Hg)" is included in the checklist. Other than those directly associated with instrumentation, there are no HEPA and carbon filters not associated with the EEF HVAC System.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3149
Document:	Binder XI-B SDD-21 ERS		
Location:	SDD-21, INEEL/EXT-2000-00259, Stage II, ERS - SDD		
Comment:	Page 54 of 117, Section 4.1.1.4.2, Item E		

50. The nibbler is indicated to require a minimum 0.87-inch diameter starting hole. It is not apparent which of the described tools would actually have this capability. If none of the described tools have this capability, IDEQ recommends that a drill and appropriate drill bit be added to the "toolbox".

Response by Comment Processing CPT. We recommend adding a drill (or rotodrill) and bits to the ERS tool set to assist in sizing operations. [This is a consolidated response to comments 3149 (Binder XI-B) and 4028 (Binder XI-B).]

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3150
Document:	Binder XI-C SDDs		
Location:	SDD-22, SDD-23 and SDD-26		
Comment:	General		

51. Appendices are identified but not actually included in the respective documents. Please clarify.

Response by James Case for Carol Reid. We recommend addition of further explanation of the absence of the Appendices. The Appendices are included in the SDDs as a placeholder per the format dictated by MCP-3572.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3151
Document:	Binder XI-C SDDs	Category: Unspecified	
Location:	SDD-23, INEEL/EXT-2000-00261, Stage II, SS - SDD		
Comment:	Page 11 of 30, Section 3.1.2		

52. Please explain how a total measurement uncertainty of 15 nCi/g and a minimal detection concentration of 40 nCi/g will allow for detection of material in Pit 9 containing TRU constituents >10 nCi/g.

Response by Doug Morrell. The reviewer is referred to EDF-ER-129 in Binder XIX (Storage-Part II, Assay and Transportation). The EDF analyzes the overall requirement that the average transuranic concentration must not exceed 10 nCi/g at the 95% confidence level. Four analytical families of possible distributions are used in the analysis. Results of the analysis indicate that to maintain an average TRU concentration less than 10 nCi/g, the assay equipment must have a total measurement uncertainty of 15 nCi/g and a minimal detection concentration of 40 nCi/g.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3153
Document:	Binder XI-D DAMS	Category: Unspecified	
Location:	SDD-25, INEEL/EXT-2000-00038, Stage II, DAMS - SDD		
Comment:	Page 19 of 109		

54. Please explain why the estimated infrastructure cost is defined in terms of a percentage of the RWMC's infrastructure cost. In addition, to the knowledge of this reviewer, there are no Stage II systems to be fueled by natural gas. Therefore, please explain why the cost of natural ("national") gas is being estimated for the Stage II project.

Response by Jim Rose. We recommend changing the word "National" to "Natural" in the definition of "Estimated Natural Gas". The Stage II infrastructure cost can only be estimated because all the specific components of the total cost are not individually metered/measured, e.g., electric power. Using a percentage of the total RWMC costs for the appropriate components seems reasonable. Also, by inclusion of natural gas as a possible component of infrastructure cost does not necessarily have a cost associated with it. It is merely a place-holder in the DAMS design against a remote possibility.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3154
Document:	Binder XI-D DAMS	Category: Unspecified	
Location:	SDD-25, INEEL/EXT-2000-00038, Stage II, DAMS - SDD		
Comment:	Page 20 of 109		

55. Besides a fissile monitoring device attached to the digface monitor, separate fissile monitoring stations are identified as part of the Stage II design.

Response by Jim Rose. We recommend the definition of "Fissile Monitor" be broadened to include the MHC Fill Monitors and the EEF Drum Fissile Monitor. The exclusion of these monitors was inadvertent and should be corrected.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3155
Document:	Binder XI-D DAMS	Category: Unspecified	
Location:	SDD-25, INEEL/EXT-2000-00038, Stage II, DAMS - SDD		
Comment:	Page 25 of 109		

56. Please note that VOCs were not envisioned to be measured at the digface contrary to the definition provided for "Pit Characteristics Data". The nearest VOC measurement station would be at the digface ventilation hood.

Response by Jim Rose. The definition of "Pit Characteristics Data" as written can be misinterpreted. We recommend the definition be reworded to say "..... by the digface monitor and other sources; such as"

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3156
Document:	Binder XI-D DAMS	Category: Unspecified	
Location:	SDD-25, INEEL/EXT-2000-00038, Stage II, DAMS - SDD		
Comment:	Page 36 thru 38 of 109		

57. Several of the definitions mention that the source for the "approved" list of contaminated waste constituents, contaminated waste constituent types, digface object types, hazardous waste constituents, radioactive waste constituent, secondary waste object type, and valid identifiers/names for both the Stage II Storage Facility and Waste Container Storage Facility "must be identified and agreed to by all appropriate parties". Please clarify what is meant by such statements. Also, explain the difference between the "Stage II Storage Facility" and the "Waste Container Storage Facility" given that only a single CERCLA storage facility is planned.

Response by Jim Rose. For clarity we recommend the quotation marks around the word "approved" in "NOTE:" be removed in each case in Section 2.3.2.2.3. The subject note was added to some of the definitions in this section specifically to accentuate the need for fixed, agreed to data sets at the outset of the software design. Since portions of the DAMS are built around these data sets, late changes to any of them can have a very large impact on product quality, its cost and schedule to implement. Also, we do not see any reference to "Waste Container Storage Facility" in this section. However, since there is indeed only one "Stage II Storage Facility" planned we recommend doing a search and correcting any discrepancies found.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3152
Document:	Binder XI-D DAMS	Category: Unspecified	
Location:	SDD-25, INEEL/EXT-2000-00038, Stage II, DAMS - SDD		
Comment:	Page iii of xvi, Paragraph 3		

53. Please provide the missing reference.

Response by James Case. We recommend incorporating the missing reference into the document as requested. The reference should be to Section 3.2.6 on page 60 of 109.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3157
Document:	Binder XVI-A MHC	Category: Unspecified	
Location:	EDF-ER-109, INEEL/EXT-99-01249, Stage II, MHC Glovebox Operating Scenarios for Processing Waste		
Comment:	General		

58. Despite compatibility testing between loads, it may or may not be appropriate to completely fill a drum with separate integrated transfer module (ITM) loads since "separation of waste from waste" is viewed as RCRA treatment (i.e., it does not seem that compatibility testing should be the sole threshold criterion for combining waste into a single drum).

Response by Brent Burton. We recommend not making a change to this EDF in response to the comment. The compatibility testing and any associated waste "separation" are required/unavoidable and must be performed regardless of LDR/RCRA treatment considerations in the MHC.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3158
Document:	Binder XVII SHC	Category: Unspecified	
Location:	SHC Interim Change Log, 30% - 90% Design		
Comment:	Change No. 2f		

59. Please provide more explanation as to why the fissile monitor was deleted at the SHC. At one time there was concern that small amounts of waste would be vacuumed leaving the possibility that 1.6 kg of plutonium could be accumulated in a container (refer to Binder 10 MHC 30% design closeout final resolution).

Response by Kevin Croft. We recommend not pursuing the action implied in the comment. In a meeting held January 20, 2000, regarding this subject, Joseph T. Taylor of BBWI Criticality Safety stated that the current approach of monitoring soil at the digface, using the Digface Monitor, and limiting vacuumed soil to volume limited batch amounts containing less than the established 200 gram per drum limits of Plutonium is acceptable. He emphasized that the batch (or campaign) approach of soil retrieval satisfactorily prevents excessive amounts of waste from being vacuumed. Note that the soil drums will be monitored for criticality at the Drum Monitoring Station inside the EEF and will undergo an assay prior to storage.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3159
Document:	Binder XX ERS (less ancillary)	Category: Unspecified	
Location:	SPC-148, Stage II, RES		
Comment:	Page 18 of 79, Section 5.3.3		

60. In the context of contact-handled, "special items" should be defined as greater than or equal to 250 mR/hr. The remote excavator system (RES) should be capable of retrieving or handling essentially any item, including special items, within certain weight limitations.

Response by Daryl Lopez. We recommend incorporating the proposed change into the solution.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3160
Document:	Binder XX ERS (less ancillary)	Category: Unspecified	
Location:	SPC-149, Stage II, Title I, ROCS		
Comment:	Page 13 of 69, Section 5.3.2		

61. In the context of contact-handled, "special items" should be defined as greater than or equal to 250 mR/hr. The remote operated crane system (ROCS) should be capable of retrieving or handling essentially any item, including special items, within certain weight limitations.

Response by Daryl Lopez. We recommend incorporating the proposed change into the solution.

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3165
Document:	Binder XXIV Cost and Schedule	Category: Unspecified	
Location:	90% Working Schedule Through Stage II		
Comment:	General		

66a. The timeframes presented in the Stage II schedule do not support the milestones dates established in the October 1997 OU 7-10 Remedial Design/Remedial Action Scope of Work and Remedial Design Work Plan or the OU 7-10 Stage I Work Plan (June 1998). Specifically, submittal of the draft Stage II Report to the Agencies in the fourth quarter of 2007 does not meet the primary milestone of April 2003.

Response by Comment Processing CPT. Per the 10/3/00 Agency Face-to-Face Meeting, DOE has submitted a request for extension (see EM-ER-188-00). This issue is under review by the three Agencies. [This is a consolidated response to comments 3113 (Binder I-A), 3165 (Binder XXIV), 3986 (Binder I-A), 3998 (Binder I-A), and 4040 (Binder XXIV).]

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3166
Document:	Binder XXIV Cost and Schedule	Category: Unspecified	
Location:	90% Working Schedule Through Stage II		
Comment:	General		

66b. The USQ for sheet piling is shown to be completed in the fourth quarter of 2001. This USQ should have been completed as a component of the Stage II 90% RD/RAWP.

Response by Comment Processing CPT. Per the 10/3/00 Agency Face-to-Face Meeting: An underground fire and/or explosion initiated by shoring pile installation is addressed in Appendix A to USQ Safety Evaluation No. SE-RWMC-99-039. (A copy was provided to the Agencies on 10/9/00.) We recommend adding this USQ to the RD/RAWP package. We also recommend providing additional detail on modeling to be performed, plans for cold testing, and measures planned during installation. Further, we recommend modifying the piling specification to indicate that the Project will provide direction (e.g. driving rates) for piling installation. We do not anticipate the need for design changes, but realize that procedures might have to be updated. [This is a consolidated response to comments 3130 (Binder V), 3163 (Binder XXIV), 3166 (Binder XXIV), 3211 (Binder I-A), and 3990 (Binder I-A).]

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IDEQ Reviewer: IDEQ Jean Underwood Significant? Yes Comment # **3167**

Document: Binder XXIV Cost and Schedule Category: Unspecified

Location: 90% Working Schedule Through Stage II

Comment: General

66c. The FSAR needs to be identified as a secondary deliverable to the Agencies consistent with the document hierarchy presented in Binder I-A.

Response by Dave Wilkins. We recommend adding FSAR as a secondary deliverable as proposed by the reviewer.

IDEQ Reviewer: IDEQ Jean Underwood Significant? No Comment # **3164**

Document: Binder XXIV Cost and Schedule Category: Unspecified

Location: Baseline WBS

Comment: General

65. The work breakdown structure (WBS) was prepared in November 1997 and some baseline assumptions have changed/evolved over time. IDEQ requests that the WBS be updated to reflect the current baseline assumptions (e.g., Stage III not necessarily a scaled up version of Stage II). Subsequently, the schedule should be updated in a corresponding manner as well with schedule assumptions and precedents clearly documented.

Response by Dave Wilkins. We recommend updating the WBS as proposed; the WBS and schedule should be updated as the project evolves.

IDEQ Reviewer: IDEQ Jean Underwood Significant? No Comment # **3161**

Document: Binder XXIV Cost and Schedule Category: Unspecified

Location: Cost Estimate Support Data Recapitulation

Comment: Page 3 of 12, Item 4

62. Please elaborate on the basis for the assumption that "any delay in completion of the Stage II design will add an average additional \$5,000,000 per year of escalation". Does this same assumption apply should procurement and construction be put on hold after completion of the design?

Response by Dave Wilkins. We recommend revising Item 4 to include the basis for the escalation calculation and what phases of the project that are impacted.

IDEQ Reviewer: IDEQ Jean Underwood Significant? No Comment # **3162**

Document: Binder XXIV Cost and Schedule Category: Unspecified

Location: Cost Estimate Support Data Recapitulation

Comment: Page 5 of 12, Item 21

63. An estimate should be provided for relocation of the Stage II facilities and equipment since relocation may occur as part of Stage II.

Response by Dave Wilkins: Assuming that "relocation" implies moving the Stage II retrieval facility to a new location following Stage II, this scope is not part of Stage II and would not be included in the RD/RA Work Plan. See also the response to comment 3135.

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IDEQ	Reviewer: IDEQ Jean Underwood	Significant? No	Comment # 3163
Document:	Binder XXIV Cost and Schedule	Category: Unspecified	
Location:	Cost Estimate Support Data Recapitulation		
Comment:	Page 7 of 12, Item 3		

64. IDEQ requests more detail on the shoring temperature bench scale piling test and cold test to be performed prior to installation of the sheet piling.

Response by Comment Processing CPT. Per the 10/3/00 Agency Face-to-Face Meeting: An underground fire and/or explosion initiated by shoring pile installation is addressed in Appendix A to USQ Safety Evaluation No. SE-RWMC-99-039. (A copy was provided to the Agencies on 10/9/00.) We recommend adding this USQ to the RD/RAWP package. We also recommend providing additional detail on modeling to be performed, plans for cold testing, and measures planned during installation. Further, we recommend modifying the piling specification to indicate that the Project will provide direction (e.g. driving rates) for piling installation. We do not anticipate the need for design changes, but realize that procedures might have to be updated. [This is a consolidated response to comments 3130 (Binder V), 3163 (Binder XXIV), 3166 (Binder XXIV), 3211 (Binder I-A), and 3990 (Binder I-A).]

IDEQ	Reviewer: IDEQ Jean Underwood	Significant? Yes	Comment # 3168
Document:	Binder XXVI Project Management Docs	Category: Unspecified	
Location:	PLN-666, Systems Engineering Management Plan		
Comment:	Appendix A		

67. Reference and summary of the April 2000 Agency meeting does not appear appropriate for inclusion in this document. Please delete.

Response by Vivienne Aho. We recommend incorporating the proposed change into the document. The cited information does not directly support the SEMP contents as presented.